THE BUILDER

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ARCHITECTURE & THE BRITISH ARCHITECT

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THIS WEEK'S NEWS

WHAT is claimed to be a new planning and constructional technique is used in a scheme for the redevelopment of Clydebank illustrated on p. 120

THE STEEL ALLOCATION SCHEME is to be reintroduced on February 4, and a reminder has been issued by the Ministry of Works about the scheme. p. 125

REFERRING to the steel allocation scheme at Preston last Monday, Mr. Duncan Sandys, Minister of Supply, gave an assurance that the Ministry would do its best to rectify in the second period allocation any unbalance shown to exist in the first period. p. 125

THE MINISTRY of Housing and Local Government issued on January 10 a circular to all local authorities, pointing out that delay in making payments to contractors increases their overhead costs, which may be reflected in subsequent tender prices. p. 127

THE NATIONAL JOINT COUNCIL for the Building Industry on Tuesday decided that, in accordance with the sliding scale, an increase in wages of 1½d. per hour is due to be operated from February 4 next. p. 127

TOTAL PAYMENTS by the War Damage Commission now amount to nearly £1,020m. in 4,373,000 separate payments. During 1951 the Commission paid out £72m., compared with £92m. in 1950. p. 133

A NEW HANDBOOK just issued to local authorities by the Department of Health for Scotland, describes methods whereby building costs can be kept down without falling below post-war standards. p. 134

HOME OWNERSHIP AND THE BUILDER

A GROWING political ideal, chiefly associated with the Conservative Party, is a property-owning democracy, which is generally understood as meaning a house-owning democracy. Owner-occupation of houses has many obvious advantages to the individual and to the nation as a whole. People who are able to buy a house (and keep it in repair, an important qualification) not only benefit by avoiding the payment of rent for the whole of their lives and ending with nothing to call their own but, by their increased sense of responsibility and self-respect, tend to become better citizens, while adding nothing to the burden of rates and taxes for housing. Therefore, the more of them the better. How many of them are there? What are their obligations? Is it possible to increase their number?

A "broadsheet" just issued by PEP (Political and Economic Planning)* usefully examines the question of home ownership (on a freehold basis) from these angles and against the background of contemporary conditions. It is pointed out that the extent of freehold ownership is not necessarily a measure of the desire for it—families may be pushed into buying their houses not because they want to, but because no alternative method is open to them, while, on the other hand, some who would have liked to own their houses may not have been able to because they could not put down the purchase price, or because small freeholds were not available. Whatever the reason for ownership, a survey of 1938 by the Ministry of Health Departmental Committee on Valuation for Rates showed that approximately one-third of all dwellings in England and Wales were owner-occupied, and there would appear to be little change in that figure to-day.

Building Society figures have tended to confirm the impression that among these owners the higher income groups predominate. The policy of the late Labour Government, therefore, of building houses to let, under the local authorities, was right in principle, but it went much too far; whether the increase in private licences authorised by the present Government will restore a correct balance between the two forms of building is doubtful, the report thinks.

This PEP report states that what evidence there is suggests that the demand for new houses to be built under private licence is not very strong, and concludes, no doubt correctly, that so long as speculative building is prohibited, the market for owner-occupation will not increase to any great extent.

"It is, of course, possible," says the report, "to stimulate the appetite for home-ownership by allowing speculative builders a free hand, and by discarding various controls over the quality of house-building and changing the present standards on which need is based. There is evidence that in the inter-war period, unrestricted speculative building had already exploited the market too thoroughly—in many cases at the expense of housing quality and amenity in general." It is true that the standard of design, construction, layout and amenity was in some cases very low and ought never to have been allowed, and certainly would not be allowed to-day; we are not concerned to defend it. But at least homes of a kind were provided, which is better than none at all. And although, as the report remarks, a house is a wasting asset, it is not so wasting as money invested in a fixed-interest security has proved to be. Great numbers of people who, before the war, invested, through a building society mortgage, in one of these speculatively built houses now have an asset that has at least kept pace with inflation, and they are able to sell it and buy another of the same value elsewhere if change of employment should necessitate a move—a point ignored by this report. What we would stress, however, is that the responsible house-building industry is completely opposed

* 16, Queen Anne's Gate, London, S.W.1. Price 2s.

to a recrudescence of the low-quality building of the pre-war years. It is, in fact, pledged to a high standard—witness the certification system of the National House Builders' Registration Council.

If home-ownership is a good thing—and this report, while weighing the pros and cons carefully, seems to suggest that it is—and the way to encourage it is through speculative building, then certain things need to be done. First, all housing of this kind must be of an approved standard of design, construction, layout and amenity, which means not merely conformation with some minimum standard of requirement, but design and supervision by a competent architect. Second, an adequate supply of materials must be assured. Third, the Government must devise some system for granting licences in bulk before individual purchases have been arranged, so that builders may bring into play all their resources of big-scale organisation and construction. The issue of licences in twos and threes on the application of private individuals can do nothing to reduce costs, so urgent a need to-day, and little to increase the number of owner-occupiers. We trust that this aspect of the problem may receive the earnest attention of the Government and that favourable action may be taken as soon as possible after the reassembly of Parliament.

The report, besides considering the advantages and disadvantages of home-ownership, which it states with candour and fairness, deals with methods of financing house purchase, not only in this country but abroad, in Canada, Australia, New Zealand and Sweden, and suggests that our own building societies might well be compelled to render services, in addition to lending money to the purchaser, such as giving an estimate of annual repair costs and providing a continuing service of technical advice. Local authorities, it is suggested, could take the initiative in providing a more adequate safeguard to the purchaser by advising him on the quality of the house and initiating a general service of technical advice on upkeep and improvements. This is a thoughtful and suggestive report that deserves serious study. It is proposed to deal with leasehold property in a later report.

A REGRETTABLE DECISION

FROM a statement printed in our last issue, it will have been noted that the R.I.B.A. Board of Architectural Education, after considering the possibility of setting up machinery for dealing with cases of alleged hardship that may arise, particularly in the case of ex-war service candidates, as the result of the regulations for the Examination in Professional Practice requiring twelve months' practical experience, have decided that " it is impracticable to set up any machinery for dealing with appeals." Those regulations came into operation on January 1, 1951, and apply to students taking the Associateship examinations in March next.

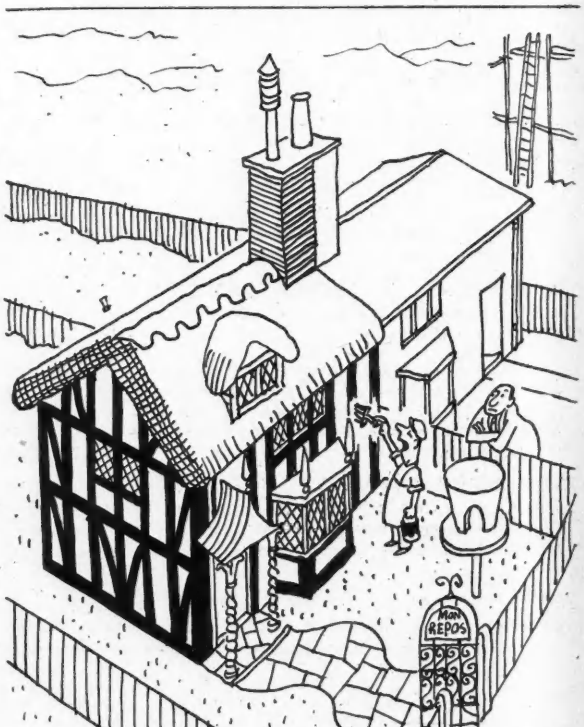
This matter has aroused attention in other than student circles for it was felt that to add a further period of practical study to a curriculum after a student had embarked on his career was unfair and amounted in effect to retrospective legislation. The decision was held to bear especially hardly upon those students whose careers had already been interrupted by the war and who, in some cases, had wives and families. The gravamen of the matter is, of course, that most local authorities and many firms in private practice have salary scales in which the holding of the Associateship is an advantage.

After the matter had been made public in our columns on August 17 last, hopes that the Board's decision would be varied were raised by the news that it was prepared to agree to the suggestion that a Tribunal should be set up to review hard cases. Since then, obviously, other counsels have prevailed, and the decision now made public is, we are told, final. The students have lost their case, but the Institute may well have lost more—a priceless opportunity to display imagination and to show that in small things as in great it possesses wide vision.

These students, if we may presume to offer them advice, will accept this decision and get on with the job of qualifying. They will be better architects for the additional time spent on practical work, and this they well know. Indeed, the wisdom of extending the practical period to one year, and even beyond, was never questioned, even by the students. They may rest assured, we think, that the Board's decision was taken with one end only in view—the interests of the architectural profession which will shortly, one may hope, embrace them.

There is one factor about this affair disquieting to some who have watched the turn of events from the outside. We do not refer to the delay or to the vacillation which have marked the taking of the Board's final decision, but to the fact that a leading committee of a liberal institution, which a professional body must be, has seen fit to take a step which places the interests of that institution above the rights of the individual and the ordinary usage of the realm, usage of which the introduction of retrospective legislation and the denial of the rights of minorities are certainly not part. The matter is hardly improved in remembering that the students, though paying a subscription, had no opportunity of having their case put before the Board, except through the heads of certain of their schools.

The R.I.B.A. will do well to note what, one hopes, may remain an isolated if regretted event, and to remember that while added efficiency in architectural practice is highly desirable, the price paid must be too high if it includes breaking faith, even with a minority of its membership.



" Of course, owners of houses on these new estates are responsible for their own decorations."

NOTES & NEWS

AN ALPHABET OF MODERN DESIGN?

RICKMAN established a claim to immortality by classifying the periods of Gothic architecture; Mr. Frederick Gibberd may well go down to posterity as the man who (apart from his distinction as an architect) crystallised the forms of modern design. His paper on "Expression in Modern Architecture" at the R.I.B.A. (published in *The Builder* last week) is a commendable and successful attempt to segregate the good modern forms from the indifferent and the downright bad. Contemporary architecture has shown an alarming tendency to settle down into a rut of horizontal-cum-vertical platitude, barely distinguishable from structural engineering. Mr. Gibberd, with his careful analysis of form and admirably explicit little diagrams, shows convincingly that it is possible to introduce a considerable degree of finesse into facades which would otherwise look bleak and unattractive. Here we have a selection of well-considered elements that might well build up into an alphabet of modern design as useful as and comparable with the now outmoded Renaissance "box-of-tricks." The lecture would make the nucleus of an invaluable text-book for all students—and, indeed, many practitioners—of modern design.

ECONOMY IN BUILDING

THE GOVERNMENT'S anxiety to increase the tempo of building during the period in which materials production is being stepped up means, quite clearly, that greater economy must be made in the use of materials. Particularly is this true of steel, of which British production in the coming year will be 1,500,000 tons below requirements. Greater use must be made of research, and the Ministry of Works Library has made a timely and useful contribution by issuing a bibliography (No. 100) of publications referring to economy in the use of building materials —particularly cement, timber, steel and non-ferrous metals. The list is obtainable from the M.O.W. Library, Lambeth Bridge House, London, S.E.1.

OXFORD GAS WORKS

THOSE who cherish the beauty of Oxford have been heartened to see the vigorous fight put up by the city against the Southern Gas Board's proposal to extend the Oxford gas works rather than erect new plant outside the city boundary. In *The Times* recently the case against the board's proposals was stated clearly and uncompromisingly in a letter signed by a number of eminent people, and headed by Lord Halifax, Chancellor of the University of Oxford.

As reported in *The Builder* of December 21 last the board's plea is based on expediency in the light of present-day economic difficulties, and at first sight the board appeared to have a good case. If the board should win the day, however, one has the uneasy feeling that the floodgate will be opened for similar acts of vandalism by public utility companies throughout the country. Times may be unusually hard just now, but one thing is certain: if we are to wait until we can "afford" to create or preserve beauty we might as well resign ourselves straight away to purely utilitarian standards.

The latest move in the dispute was made on January 7, when Oxford City Council accepted the recommendation of its planning committee that permission should be refused to the Southern Gas Board for a proposed extension of the gasworks on the Thames frontage. There was unanimous agreement with the committee's decision. But anxiety was expressed by some members about the possible liability for compensation which may have to be met by the city.

A.A. ENTRANCE EXAM.

THE entrance examination for admission to the A.A. School of Architecture in September, 1952, will be held on March 17. Last date for applications, March 1. Full particulars and application forms from the Principal, 36, Bedford-square, W.C.1.

COVENTRY CATHEDRAL

MODIFICATIONS to the design for the new Coventry Cathedral, announced by the cathedral reconstruction committee on January 15, included a decision to replace the movable glass screen dividing the porch from the nave by a rigid glass wall having doors decorated with transparent figures of saints. Mr. Graham Sutherland is to be asked to submit designs for the huge tapestry which will be the background to the altar. His subject will be "Our Lord in Glory."

HISTORY OF SURVEYING

A SOCIETY has recently been formed to study the history of all branches of surveying. At a recent meeting held at the Royal Institution of Chartered Surveyors a paper was read on the history of quantity surveying, followed by a discussion.

TO LECTURE IN INDIA

MR. MAX LOCK, F.R.I.B.A., M.T.P.I., is undertaking a lecture tour for the British Council in India, West Pakistan and Ceylon, between January 3 and the end of February. He is taking as his subject "Recent Developments in Town Planning in Britain" and films, film strips and slides will be shown to support his lectures.

PROFESSIONAL ANNOUNCEMENTS

The practice of the late MR. FERNAND BILLEREY, F.R.I.B.A., of 93, Eaton-place, S.W.1, is being carried on by MR. ROBERT CROMIE, F.R.I.B.A., at 10, Manchester-square, W.1.

With the departure of MR. GEOFFREY HOPKINSON, A.R.I.B.A., B.Arch., A.M.T.P.I., his deputy, to Bracknell Development Corporation on January 1, the department of the Borough Architect and Town Planning Officer of Northampton, MR. J. L. WOMERSLEY, A.R.I.B.A., A.M.T.P.I., has been reorganised and instead of a deputy there will now be two principal assistants directly responsible for the education and general and housing and planning sections. MR. J. A. HAGUE, A.R.I.B.A., who has been in charge of the education and general sections since October, 1949, took up his new appointment on January 1, and MR. JESSE DEAN, Dip.Arch., Dip.T.P., A.R.I.B.A., at present chief assistant to Messrs. A. and R. Pickles, Halifax, will take over the housing and planning sections on February 25.

MR. N. JAMES RUSHTON, L.R.I.B.A., F.F.A.S., of 21, Markham-street, London, S.W.3, has opened a branch office at 17, Grand-parade, St. Leonards-on-Sea, (Tel., Hastings 366), having acquired the practice of the late MR. ALFRED WORMERSLEY, L.R.I.B.A., of that address.

MR. R. E. N. LOWE, F.R.I.C.S., of 39, Lombard-street, is now practising under the style of MESSRS. R. E. N. LOWE AND CO., chartered quantity surveyors, at Pomeroy House, Basinghall-street, E.C.2.

MESSRS. LAY AND PARTNERS, quantity surveyors, have taken into partnership MR. H. HANDLEY, A.R.I.C.S. The name and style of the firm will remain unchanged, and the practice will continue from 8, Clarges-street, W.1, and 41, South King-street, Manchester, 2.

COMING EVENTS

FRIDAY, JANUARY 18

ARCHITECTURAL SOCIETY.—Theatrical revue entitled, "Extras and Variations." School of Building, Ferndale-road, Brixton, S.W.4. 7.30 p.m.

MONDAY, JANUARY 21

BUILDING CENTRE.—Opening by Mr. David Eccles, Minister of Works, of the new premises of the Building Centre. Store-street, Tottenham Court-road, W.C.1. 12 noon.

ECCLESIOLOGICAL SOCIETY. — "English Mediæval Architecture in Colour." by Mr. Percy Johnson-Marshall, A.R.I.B.A., A.M.T.P.I. Archbishop Davidson Institute, Lambeth-road, S.E.1. 7 p.m.

L.C.C. BRIXTON SCHOOL OF BUILDING.—Annual prize-giving. Guildhall, City, E.C.2. 7 p.m.

TUESDAY, JANUARY 22

L.M.B.A.—Luncheon at which Mr. David Eccles, Minister of Works, is expected to be present. Park Lane Hotel, W.1. 1 p.m.

EASTERN FEDERATION OF BUILDING TRADES EMPLOYERS.—A.G.M. University Arms Hotel, Cambridge. 10.30 a.m.. Guest of honour: Mr. Stephen Hudson.

FEDERATION OF CLINKER BLOCK MANUFACTURERS.—Luncheon and A.G.M. with Mr. Hugh Molson, Parliamentary Secretary, Ministry of Works, as chief guest, Holborn Restaurant, High Holborn. 1 p.m.

FRIDAY, JANUARY 25

INSTITUTE OF QUANTITY SURVEYORS (LONDON BRANCH).—Annual dinner. Comedy Restaurant, 38, Panton-street, Haymarket, S.W.1. 7 p.m.

ROYAL SANITARY INSTITUTE—"The Influence of Lighting Developments on Health and Safety," by Dr. J. H. Aldington, B.Sc. Public Hall, Lune-street, Preston. 2 p.m.

R.I.C.S. (JUNIOR ORGANISATION).—Annual dance. Bush House Restaurant, Strand, W.C.2. 7.30 p.m.

SATURDAY, JANUARY 26

INSTITUTION OF MECHANICAL ENGINEERS. — "Mechanical Installations in Buildings," by Mr. P. T. Fletcher, I.M.E. Storey's Gate, S.W.1. 3 p.m.

COMPETITION NEWS

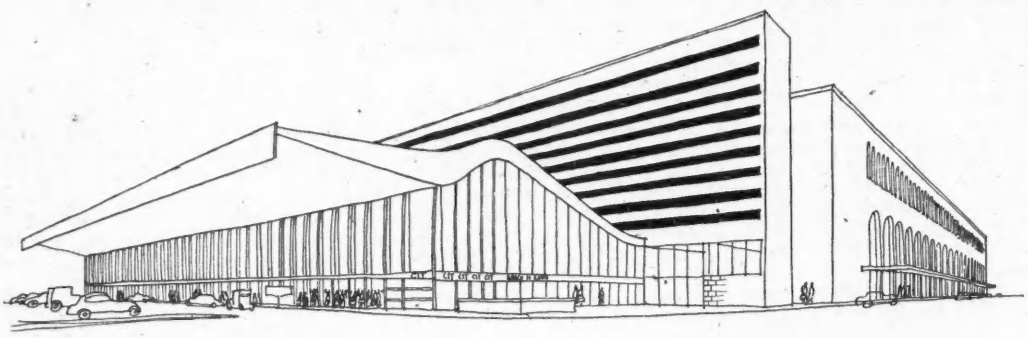
DESIGN OF SERVICE STATIONS

In their original announcement on the competition for the design of service stations, the conditions for which were given in our last issue, Shell-Mex and B.P., Ltd., omitted to state that a deposit of £1 1s. 0d. is required from intending competitors when applying for conditions to Publicity Dept., Shell-Mex and B.P., Ltd., Shell-Mex House, Strand, W.C.2.

FROM "THE BUILDER" OF 1852

Saturday, January 17, 1852.

REPORTS AS TO THE KING'S-CROSS TERMINUS.—Some exaggerated rumours as to a probable failure of part of the works at the King's-cross Station of the Great Northern Railway, have been extensively circulated, and a malicious statement, which looked like truth, was sent us for publication. Inquiry on the spot, however, leads us to believe that what is being done there is simply by way of precaution. We found that the vibration of fixing the carpentry on the ribs required the precaution of temporary shores whilst such work was in execution, and these have been fixed, which greatly lessens the tremor upon the works. Without them there was a tendency to move the green brickwork outwards. To make the piers more secure they are adding brickwork in cement, and so obtaining immediate rigidity. The piers were certainly small, considering their office, and the time of year.



ROME STATION - VIEW FROM PIAZZA

Frank Hoar June 1951

Rome's Railway Station

Described and Illustrated

By H. FRANK HOAR, BA

WHEN the original project for Rome terminal was conceived in 1938, Italy was at the zenith of her Fascist power. It was an era sterile in its art and grandiose in its architecture. In the new main station at Milan it reached a height of bad taste which was unsurpassed even in Nazi Germany. The character of the new Rome station was to have been a modernised temple, heroic in scale and with colossal columns at the entrance.

Fortunately this conception came to little, and only a part, the office buildings at the rear on a side street, was constructed. The design is somewhat different from the front of the station, but being quite simple it in no way clashes with the later style. The war, however, and the generally unsettled conditions put a stop to the work.

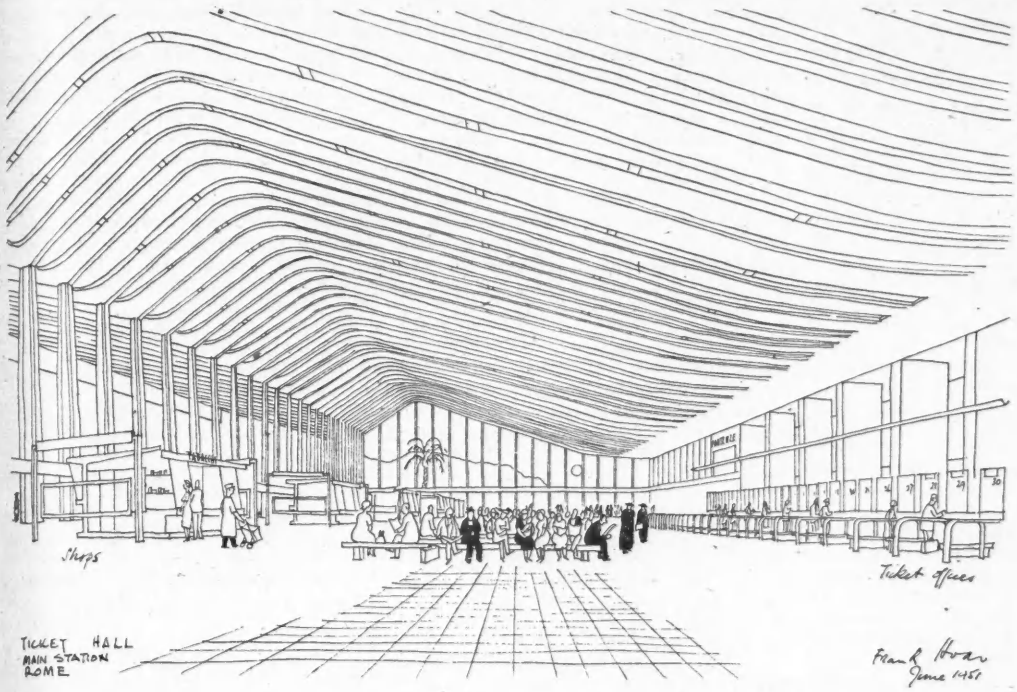
In December, 1947, it was decided not to proceed with the original project and to hold a competition for the entrance and office buildings which would reflect the new way of life in Rome, and the change of political ideologies ; although there existed the possible loss of monumentality it would gain by being more human and appropriate to the democratic way of life. The design was to reflect the character of a public edifice and was to take full advantage of modern materials and methods of construction.

The winners of the competition, Ruben Fienga, construction engineer ; M. Castelliazzi, V. Fadigati, E. Montuori, A. Vitellozzi, engineers ; L. Calini, and A. Pintonello, architects, have produced a scheme which is both functional and decorative. It contains two elements—the horizontal office building 775 ft. long and 93 ft. high, and the main entrance hall with its very pleasing S-shaped roof supported by a series of marble-faced tapered columns between which are the entrance doors. Slots in the roof allow for artificial lighting by night and for long lines of skylights for natural lighting.

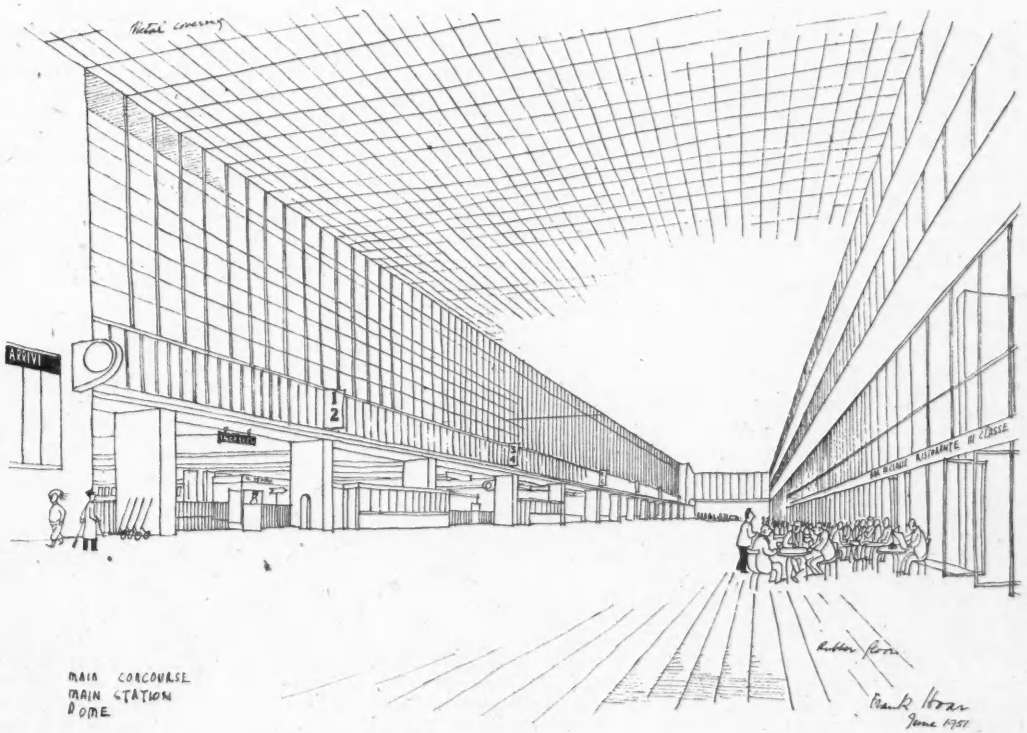
The facing of the horizontal office building is of pink granite and travertine, which harmonises and ties in with the earlier buildings. Nine horizontal slots, each 21 in. high, run the length of the building. There are two to each floor. Heating is provided by hot water pipes laid in the floors, and air-conditioning exists for summer use. The old wall of Servian has been preserved. It is one of the oldest in Rome, and its huge weathered blocks can be seen through the glass wall at the end of the ticket hall.

FIRST CLASS RESTAURANT MAIN STATION ROME.

Almost everything possible has been provided for the convenience of passengers. Not only are the waiting-hall and concourse most spacious and well-lit, but shops selling every commodity necessary for comfortable travelling are found around the two halls. The bar, compared with the average dingy English example, is a dream, and a revelation. Drinks are prepared on two tiers, one for the simpler and the other for the more complicated concoctions. There is an outside café where arriving passengers and trains may be viewed at leisure. First- and second-class restaurants, at prices varying from moderate to high, provide excellent meals. Arrival and departure indicators are well placed and legible, but above all there is a refreshing absence of soot and dirt, of noise and congestion. Trains are all-electric, and the rubber floor of the main concourse adds to the general noiselessness. A commencement has been made by sinking a spacious stairway in front of the building to link up with the projected



underground railway which at the moment shows few signs of existence. The resulting excavations will no doubt bring to light many more relics of ancient Rome. The designers of this great terminal are to be congratulated on a notable achievement. As they have expressed it in their competition report, they "hope that their work will express the feeling of their time and still be of a character timeless and Roman." And how well have they succeeded in that intention.



CORRESPONDENCE

RELATIVE COSTS OF "POINT" BLOCKS AND "SLAB" FLATS

To the Editor of *The Builder*

SIR,—Mr. Pearson, in his letter in your issue of January 4, makes the bald statement that "high slab blocks are universally detested." This statement is inaccurate.

For example, the first section of the Pimlico Housing Scheme, which consists of four tall slab blocks, was awarded the R.I.B.A. Bronze Medal for Architecture in 1951, and also received a Festival of Britain Award.

Universally detested?

MICHAEL POWELL

94, Addison-road, W.14.

To the Editor of *The Builder*

SIR,—Mr. Stamp's letter, in your issue of January 11, refers to the case of the Roehampton (Portsmouth-road) Housing Scheme and the use of "Point" flats. As there are nine of these on a site of 25 acres, this is a very good example to illustrate the point I was trying to make in my letter of January 4. I quoted Mr. Stamp's own figures for a comparison of costs which are as follows:—

Point flats ...	...	£735 per room
Maisonettes	...	£425 „ „
Terrace houses	...	£375 „ „

The fact that I multiplied these figures by three to arrive at the comparative cost of a three-roomed dwelling does not affect the argument.

There must be a yard-stick in comparing building costs, as any quantity surveyor would agree, and the cost per room was taken as a basis. It would not have been fair to have taken the cost of a three-roomed flat and a four-roomed maisonette as this would not have been the same basis. (There was no mention in my letter, in any case, of the Roehampton Scheme.)

The figures of the various types at Roehampton are as follows:—

Flats	...	393 dwellings
Maisonettes ...	...	180 „
Terrace houses	...	76 „
Single flats ...	...	6 „

As will be seen the proportion of "point" flat dwellings is very high, approximately 60 per cent., and the result is the very high average cost per room of £671. In order to bring down the average cost per room to a reasonable figure it would be necessary to reduce the number of dwellings provided in "point" flats. The County of London Plan 1943 (The Abercrombie Report) has a table on page 174 (Column "A") which suggests for a density of 100 persons per acre a proportion of 60 per cent. in houses and 40 per cent in flats. At Roehampton this proportion is approximately reversed with a bad effect on average cost.

Mr. Stamp argues that an overall development of "slab" flats would have destroyed the natural beauty of the site. With this I entirely agree, but would also point out that nine "point" flats so closely grouped together would also destroy the beauty as they measure 60 ft. square and are 100 ft. in height.

The sensible course would be to adopt the suggestion on page 174 of the Abercrombie Report where, in Column "B," a 20 per cent. reduction is allowed for sites of special difficulty. This would, of course, result in fewer dwellings, and Mr. Stanp will probably argue that we would thereby deny a number of dwellings to people who desperately need them. My reply would be that the contrary is the case as the high cost of the "point" flats, which would absorb a much larger proportion of labour and materials, would result in a large number of family houses being indefinitely postponed. The L.C.C. have only a limited number of dwellings to erect per annum, and there are many areas in East and South London where the people are in desperate need of houses and the labour and materials could be used to better advantage. In those districts the workers would be housed nearer their work, whereas at Roehampton a considerable sum every week would be spent in fares as there is no industry of any extent near Roehampton. Another point which emerges from an examination of the Roehampton detailed plans is that the central heating, continuous hot water and electric fires are provided for the single or childless couples in the "point" flats and not in the family homes where labour-saving devices are most needed.

If Mr. Stamp is interested I could supply him with particulars of "point" flats in the London area which are much more reasonable in cost than the Roehampton type. These are seven storeys in height; the brick walls are load-bearing and steel is largely eliminated; the heating and hot water are supplied from a boiler combined with an open slow-combustion stove in the living-room which also supplies a couple of radiators; the bathroom and w.c.s are naturally lighted and ventilated, and the whole scheme is thoroughly practical.

There is a danger in adopting a rigid formula with regard to densities or anything else and disregarding local conditions. In these discussions there are two separate issues involved: the multi-storeyed flats whether of the slab or point variety obviously occupy much less ground space than the maisonettes and houses; but they are very much more costly to erect, as the figures show. These two aspects must be considered together but should not be confused.

Mr. Stamp is doing a fine work for the County of London and we all wish him luck in his efforts to extend L.C.C. building operations to areas where industry and housing are placed so that the worker is housed not too far from his work.

L. G. PEARSON.

2, Gordon-square, W.C.1.

EMPLOYMENT OF QUANTITY SURVEYORS AND MEMBERSHIP OF THE R.I.C.S.

To the Editor of *The Builder*

SIR,—May I introduce a further point in the discussion that has been taking place in your columns recently on the attitude of the R.I.C.S. to the employment of its members, or, as in my case, those desirous of membership?

I am employed as a quantity surveyor by a firm of consulting engineers whose name is eminent throughout the engineering world and which includes amongst its partners two past-presidents of one of the senior engineering institutions, yet on two occasions, in 1946 and 1950, my application to be considered as a candidate for membership was rejected.

No official reasons could be stated, but unofficially, I understand that the council take the view that consulting engineers should give their quantity surveying work to independent practising chartered quantity surveyors. Our work, of national importance, is of such a specialised nature, however, as to make this impracticable.

In these days of inflation it is rare indeed for a contract to reach its final account stage without the usefulness of the independent quantity surveyor—although employed by consulting engineers—to ensure equitable settlement, between client and contractor, being fully demonstrated, and yet I am denied chartered professional status.

Like Mr. C. H. Waldram I am confused when one considers the number of large retail businesses which are considered suitable to employ chartered quantity surveyors.

E. P. ALMOND.

5, Cyrillian House,
Mulgrave-road, Sutton.

To the Editor of *The Builder*

SIR,—I write to give support to Mr. Turner and to the excellent case presented by Mr. Waldram (in your issues of December 14 and January 4 respectively) for recognition by the R.I.C.S. of quantity surveyors employed by contractors.

I also agree with the suggestion of "Banquo" [*The Builder*, January 4] regarding a degree, but in regard to the immediate problem of recognition I fail to see that "Banquo" has established a case. This summary of the work of the contractor's surveyor is incomplete, and I find it difficult to believe that a quantity surveyor is impartial on one day, but if he takes employment with a contractor the very next day, he becomes incapable of the professional integrity demanded by the R.I.C.S.

One must emphasise that two official committees have already expressed dissatisfaction with the policy of the R.I.C.S.

In truth it is a restrictionist policy—a closed shop attitude—and the very type of trade unionism which is hampering the expanding economy we need to-day.

I sincerely hope that public figures will do their utmost to rectify this sad state. A professional body with a Royal Charter has a duty to all, and not one section only, of a very vital profession.

"S. Q."

London, N.

APPRENTICESHIP IN PORTSMOUTH

To the Editor of *The Builder*

SIR,—Much has been written by many people on the subject of assuring the future of the building industry by increasing the number of apprentices.

In Portsmouth serious consideration has been given to the problem and at the

same time to the other aspect, namely, absorbing the output from the Corporation's Junior Building School, since it was found that many boys were entering H.M. Dockyard and other trades after considerable sums had been spent on their training for the building industry. As a result of consultations in 1950, between representatives of the Joint Apprenticeship Committee, Building Trade Employers, Master Builders, Operatives and certain Committees of the City Council, the following resolution was adopted by the Portsmouth City Council :

"Resolved that it be a condition in all Corporation building contracts that the ratio of apprentices to craftsmen be one in eight on January 1 in each year, provided that in the event of there having been insufficient trade apprentices available, as certified by the appropriate local Youth Employment Committee, the Council shall have the right to waive this condition until such time as they become available, and further provided that in the event of the output of boys seeking apprenticeship in the City exceeding the ratio laid down, the Council shall reconsider such ratio as speedily as possible."

This became effective on January 1, 1951.

At its meeting in December, 1951, the Council decided to continue the scheme with one amendment, namely, that *at the date of submitting a tender*, a firm must have the ratio of apprentices laid down to the number of craftsmen on January 1 of that year, since it had been found under the original scheme that if a firm had not the required ratio on January 1, it was not able to submit a tender for the whole of the twelve months. In considering the scheme, the following points should be noted :

(1) The date of January 1 was selected because it was felt that most firms would be employing their lowest number of men at that period of the year.

(2) The scheme does not restrict firms to Portsmouth apprentices. Thus so long as a firm has the required number of boys indentured under the National Joint Apprenticeship Scheme in any area, it is not debarred from tendering.

(3) In the event of a firm being unable to get apprentices, it can obtain a letter from the Local Juvenile Employment Officer, and from the Junior Building School to the effect that the candidates are not available and submit these with the tender, thus avoiding disqualification.

This scheme has had the result of absorbing all those boys from the Building School, and also from the Juvenile Employment Exchange, who wish to enter the industry. It has also spread the duty, the very important duty, of training new people in the industry over a larger number of firms.

JOHN PRIVETT, President,
Portsmouth and District
Federation of Building
Trades Employers.

Privett House,
Copnor Road, Portsmouth.

TRAINING FOR BUILDING

To the Editor of *The Builder*

SIR,—Your newspaper has, rightly, stressed the value of education for building. There are, to-day, means whereby an ambitious man can rise to the top. But the average man is not aware of those means ; in fact, he does not aspire to the top until, in the late twenties or early thirties, he gains some small promotion and ambition is awakened.

I feel that architects, surveyors, builders or engineers, possibly through their institutions, should take upon themselves the task of piloting the ambitious student to whatever goal he is best suited. For instance, it is readily acknowledged that a clerk of works is one of the key men on a building site, but what thought has ever been given to his training ? There are, it is true, certain examinations which set down the standard of education to which he should aspire ; these examinations dwell lovingly on ordinary building practice and skim very lightly over the many problems set by the multitude of specialists brought into being by modern constructional trends. Clerks of works in the future must be properly trained to their job and not win their positions because of their astuteness in answering a few questions on, perhaps, bolection moulding or hammer dressing ; they must be able to offer advice on a variety of new materials, how they should be protected or how they can be touched up.

Architects, for their part, should follow

SICILIAN MOSAICS : A series of magnificent mosaic floors has been discovered in the course of excavations at a Roman villa near Piazza Armerina, central Sicily, most of them practically undamaged. That above is a detail of a mosaic in the great corridor, which depicts hunting scenes. The corridor measures 70 yards long by 6 yards wide.

the example of the builders with foremen and set up courses to train the clerk of works.

As for the builder, he has certainly awakened to the benefits of education but not, as yet, to the way that education should be carried out; to provide a course of training is only half the battle. The other half is to ensure that the proper persons take that course and that the education gained is put into practice on the site. How many foremen, taking a foremanship course, have said to themselves: "These ideas are all right but they wouldn't work on my job." ?

What the builder needs, I feel, is an educational supervisor, a man who can go on to the site and give a personal demonstration of the way things should be run—an efficiency expert, if you like, but one who is practical. Perhaps some of the foremen lecturers to foremanship courses could be encouraged to bring their rules out of the classroom and on to the job. Possibly the L.M.B.A. would like to add yet another expert to their advisory service so that their members could train the foreman on the site as well as in the classroom.

A year or so ago, I expressed the opinion in your columns that foremen could be trained within a firm by means of a "Foremen's Club." An educational supervisor would find this an ideal means of keeping in touch with the staff.

F. H. GREGORY.

60, Kerridge-court, N.1.

QUIZZERS QUIZZED

To the Editor of *The Builder*

SIR,—The "Building Quiz" published in your issue of December 21, was very interesting, but I wish to draw your attention to the undermentioned inaccuracies.

Section 6—*Question* (*a*): The answer "Common fir" to the botanical name Pinus sylvestris is incorrect. Three suitable answers are Red deal, Yellow deal, or Northern Pine. The term common fir indicates a cheaper and poorer quality timber such as Abies Excelsa. This term has also been applied to British Columbian Pine (Oregon Pine or Puget Sound Pine) (Pseudotsuga taxifolia or P. Douglasii). The fact that in America, P. taxifolia is referred to as "Redwood" further complicates the position.

On a visit to the U.S.A. some years ago, I actually saw a balk of Puget Sound Pine of the exceptional length of 120 feet and 30 inches square.

Section 6.—*Question* (*d*): I cannot agree that the word "lead" is a more common or an alternative description for a ternary alloy which includes amounts of tin and cadmium and is superior to the parent metal.

Section 12.—*Question* (*d*): Both the abbreviation R.C. and W. and its full meaning "raking, cutting and waste" fell into disuse with the issue of the fourth edition of the S.M.M. (July, 1948). Section 7 of the General Principles states that "All measurement of cutting shall, unless otherwise stated, be held to include for the consequent waste."

In connection with Section 19.—Question (d), it may be of interest that I have in my possession a copy of the Pocket Book of Engineering Formulae by Guilford Molesworth for the year 1867. I would be interested to know how many older copies (other than in libraries, etc.) are in existence.

FRANK GEE, A.R.I.C.S.
Chartered Quantity Surveyor.
Doornkop, Wallingford-road,
Davyhulme.

DELAY IN SETTLING FINAL ACCOUNTS

To the Editor of *The Builder*

SIR,—In your issue of November 9 last, you very fittingly assigned one and a half columns of valuable space to a letter from the chairman of the Distributors of Builders' Supplies Joint Council (Mr. W. S. Shirra) in order that his pertinent observations concerning this increasingly important subject might receive consideration by the large body of contractors and sub-contractors who constitute the employing side of the building industry.

Since that date the *Sunday Times* has taken up the cudgel, and, in referring to the impact on the industry as a whole of the lackadaisical and long-drawn-out procedure associated with these settlements, has commented as follows:

> If Government Departments and local authorities would cut down the time lag between the completion of building work and the payment of contracts, they could make the biggest single move possible towards the reduction of overdrafts.
>
> Big contractors complain of having to wait as much as three years in some cases for the settlement of outstanding moneys. The L.C.C. has acquired a considerable reputation for tardy settlement. County and borough authorities in smaller centres have reputations that vary only in degree. Almost invariably delay has become the custom.
>
> The big contractor does not have to pay his sub-contractors until he himself is paid. The sub-contractors therefore have to keep their merchants waiting.

For a long time past the council of my federation has also been much concerned with these delays, particularly as the painting contractor is usually the last on the job among the specialist trades and consequently the last, as a rule, to receive final settlement.

It is probable that during the past month or so many thousands of builders and sub-contractors have had occasion reluctantly to review with their bank managers the varying terms of their credit arrangements to an extent that may well have spoilt the happy Christmas and New Year which most of them were entitled to anticipate. Be this as it may, the position has become acute and it behoves responsible organisations in the industry collectively to take up the issue at the highest level of the Government departments, municipal corporations, state industries and undertakings concerned with a view to seeing what immediate remedial measures can be instituted.

At long last it is perhaps the sub-contractor who suffers most, at least his is by force of circumstances the higher credit risk. Consequently the greater such risk becomes, the greater will the reflection be seen in the figures he quotes for the job, while on the other hand his suppliers will have to exercise a still greater measure of patience.

Week by week, year in and out, the building employer has to pay his operatives and meet current expenses and general overheads on a specific day. As is well known, the liquidity of his cash position determines whether he is obliged to seek accommodation from the bank or not in order that these liabilities may be duly met. This state of affairs has existed in the industry for so long that it has become an integral consideration in the day to day operations of most builders, yet, at rock bottom, the delay in payments of money due to contractors and sub-contractors alike is the reason why so many in the industry are compelled to support their businesses by this moderate form of usury.

The situation, as earlier indicated, is now deteriorating rapidly and the bodies responsible need to be shaken out of their lethargy.

My council feel therefore that they are not alone among the specialist trades in anxiously enquiring "What, in these stringent financial times, is being done within the industry to call a halt to the dilatory practices of the oligarchies concerned with these payments?"

A. EDWARD WADE,
Director, The Federation
of Painting Contractors.

St. Stephen's House, S.W.1.

PURCHASE TAX AND BILLS OF QUANTITIES

A number of correspondents have written letters on this subject. A selection will appear next week.—ED.

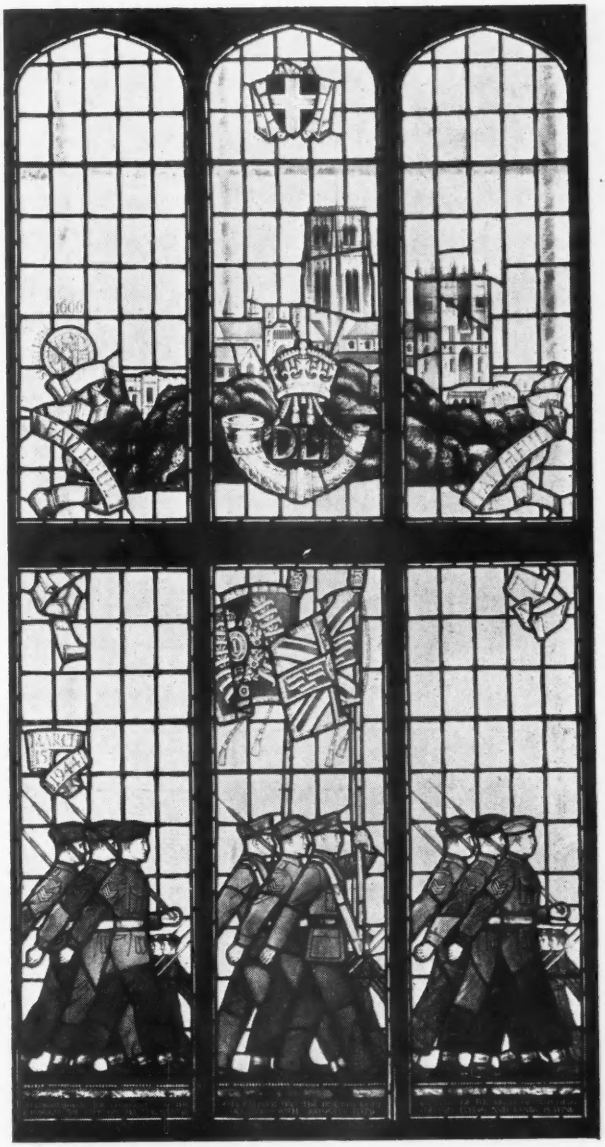
OBITUARY

E. W. TRISTRAM, Hon.D.Litt.

We regret to announce the death, which occurred at Haslemere on January 11, of Professor Ernest William Tristram, Hon.D.Litt., A.R.C.A., Hon.A.R.I.B.A., Professor Emeritus, Royal College of Art. He was 69.

Professor Tristram was responsible for work on the preservation of mediæval paintings and monuments throughout the country, and notably at Westminster Abbey, Canterbury, Norwich, Exeter and Winchester Cathedrals, St. George's Chapel, Windsor, St. John's College Gateway, Cambridge, and Christchurch Priory, Hants. He carried out reconstructions of mediæval paintings at the Houses of Parliament, Westminster Abbey, Eton College Chapel, Canterbury, Exeter, and Winchester Cathedrals, Oriel College, Oxford, and other places. His original work included paintings in York Minster, St. Elizabeth's Church, Eastbourne, St. Fin Barre's Cathedral, Cork, Ireland, and in a number of other churches.

In collaboration with T. Borenius he wrote "English Mediæval Painting"; also (with Dr. D. H. S. Cranage), "The Cloister Bosses of Norwich Cathedral."

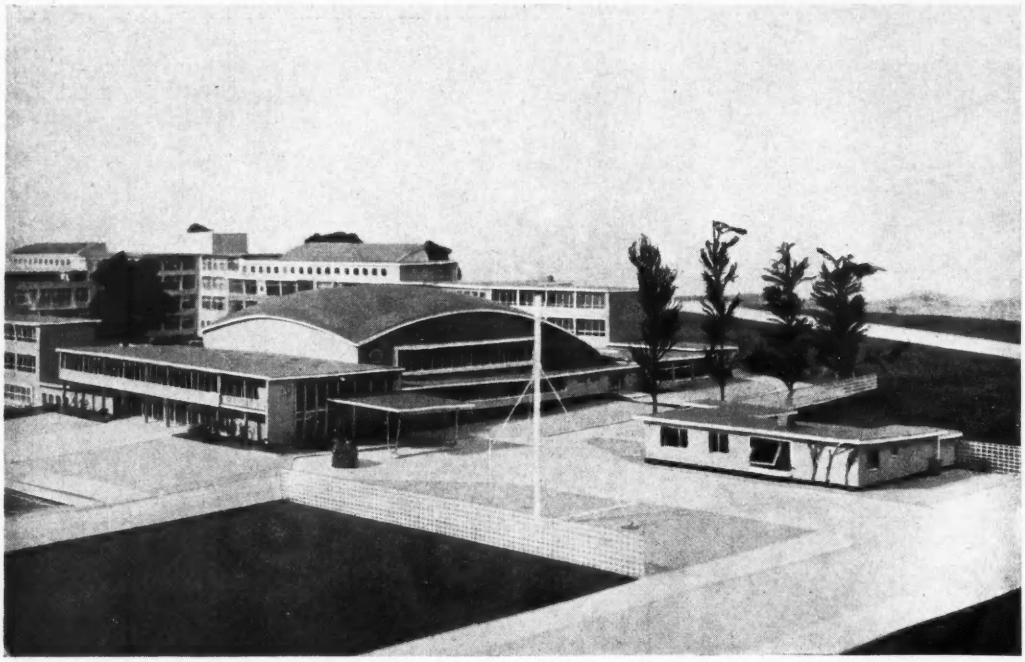


MEMORIAL WINDOW FOR DURHAM TOWN HALL

DESIGNED and EXECUTED
by
H. WARREN WILSON, ARCA

A WINDOW designed and executed by H. Warren Wilson, A.R.C.A., Lecturer in Decoration at University College, London, was unveiled on November 28 in the Durham Town Hall. It is interesting because of its presentment of figures in contemporary costume. The window commemorates the granting of the Freedom of the City to the Durham Light Infantry Regiment, and shows the Colours being carried in procession through the city. This grant confers on the regiment the right of marching through the city on all ceremonial occasions with fixed bayonets, bands playing and Colours flying.

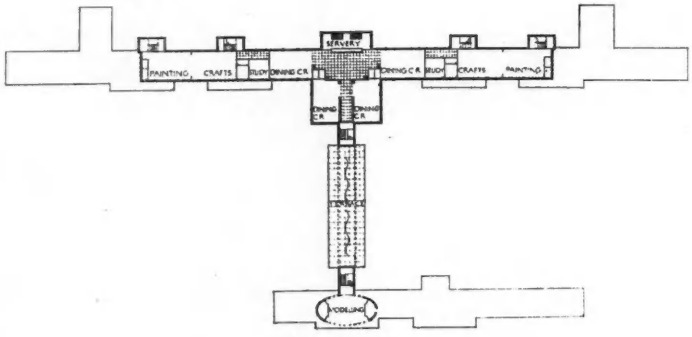
At the head of the window is a presentment of Durham Cathedral standing superbly on the wooded hill which gives to Durham its special dignity and character. On the lower part of the hill is imposed the regimental badge of the D.L.I., the well-known bugle with the Imperial Crown above. In the left-hand top light is incorporated the city seal, granted in 1604. The word "Faithful" appears here. It recalls the connection of the Durham Light Infantry with the old 68th Foot, the motto of which was "Faithful." Across the lower lights of the window marches the Colour escort bearing the King's and the regimental Colours.



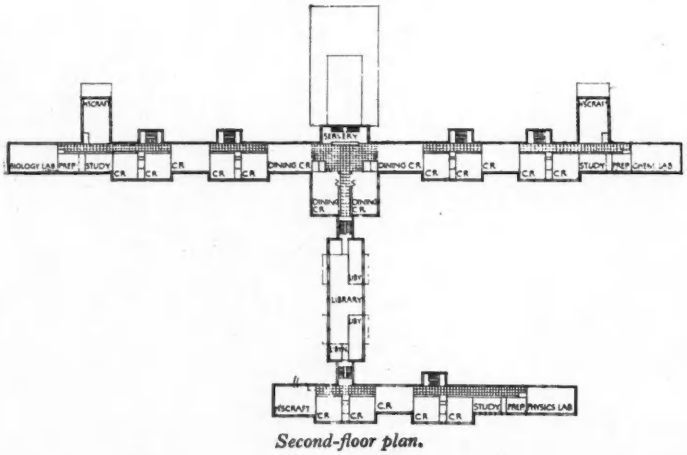
View of main entrance and assembly hall block.

KIDBROOKE LCC COMPREHENSIVE HIGH SCHOOL, BALHAM HILL

SLATER, MOBERLY, UREN AND PIKE, FF./AA.RIBA, ARCHITECTS



Third-floor plan.



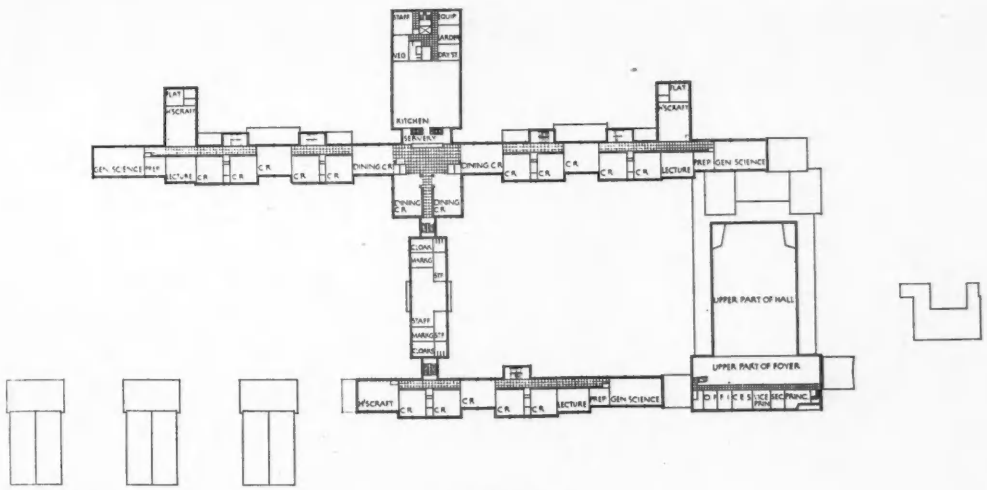
Second-floor plan.

KIDBROOKE Comprehensive High School, now under construction at Balham Hill, S.W.12, for the London County Council, has been designed to take 2,210 pupils, all girls, and is expected to take two to three years to complete, depending upon steel supplies.

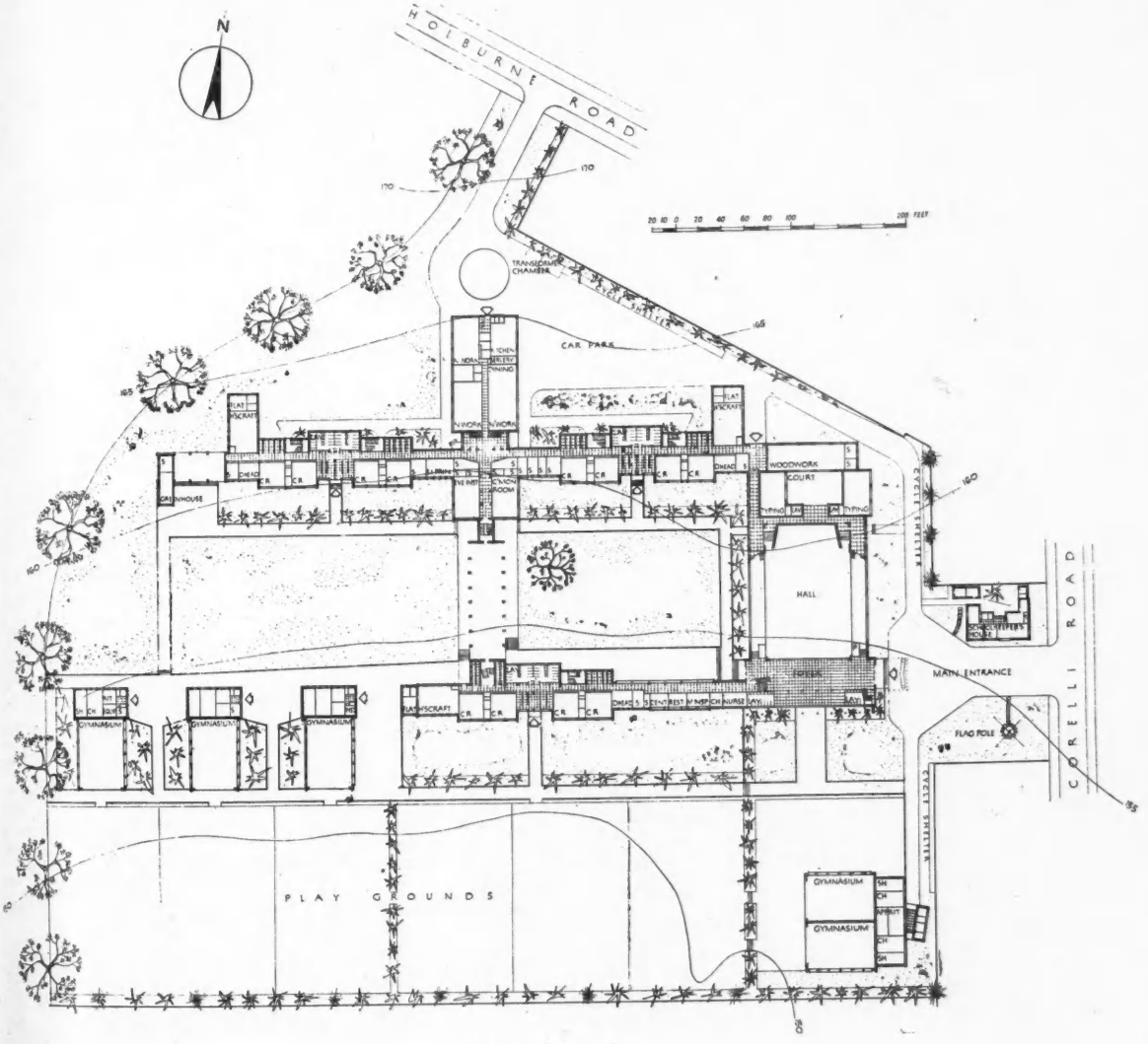
The site covers nearly 10 acres, with a fall from north to south of about 20 ft. There are two entrances to the site, one, in the north-west corner, about 50 ft. wide, and the other, on the east, about 100 ft. wide. A study of the site indicated that the main entrance should be from the east since this position is more important and central.

To keep costs down it was decided to eliminate lifts and provide a building of mainly three storeys, with a small proportion of accommodation at third-floor level.

The layout of the various sections of the school has been considered carefully to break up undue lengths of uninterrupted building facade and to obtain a scale related to the children who will use it. Advantage has been taken of the site levels to create interest by means of terraces, etc.

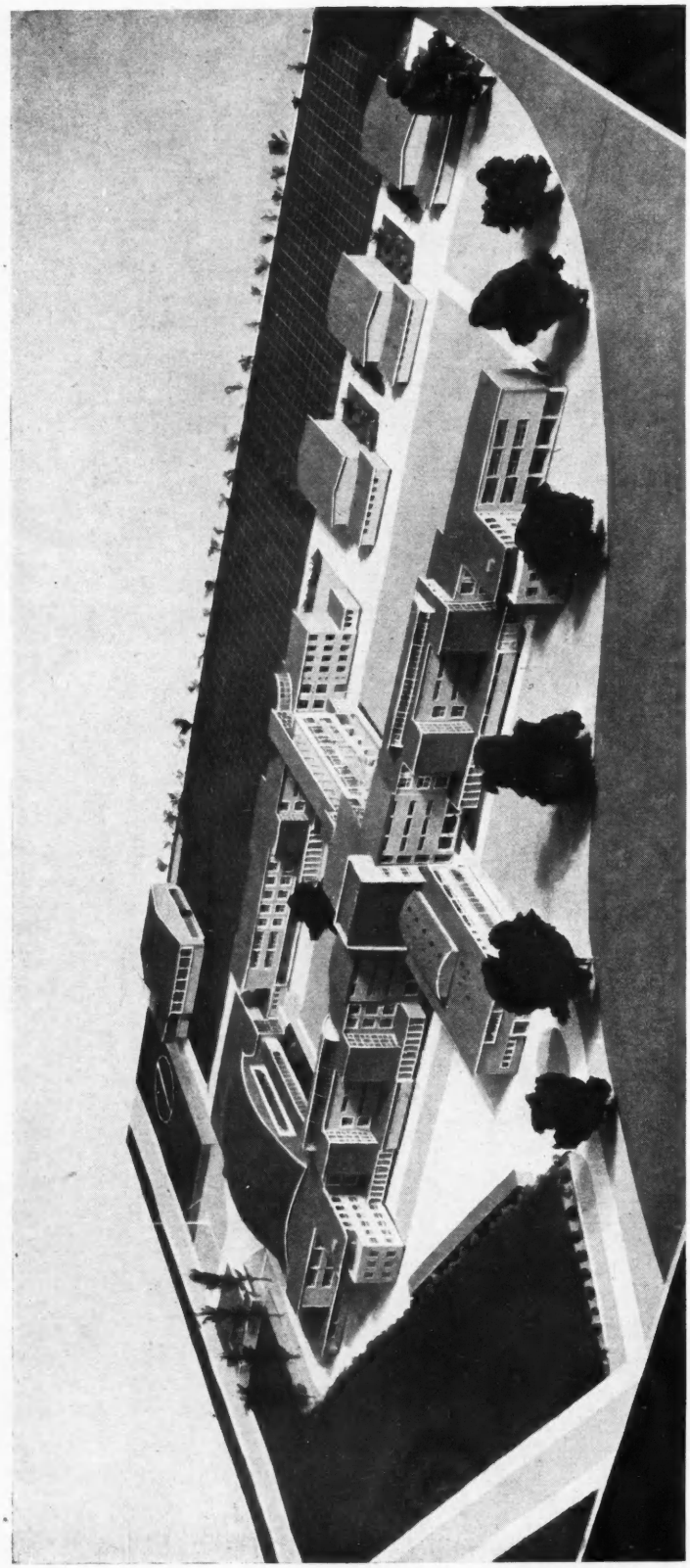


First-floor plan.



Ground-floor plan.

E*



General view of model from north-west.

The plan divides the school into three main teaching blocks, while units common to all are related in the most suitable position.

The principle of planning adopted is that of corridor access at ground level with staircase access to short lengths of corridor on the upper floors. On these upper floors, however, suitable classrooms of the larger sizes are used as links so that, in emergency, movement is possible from one stair to the next, so obviating difficulties of fire escape.

By this method, too, the "link" classrooms obtain light on both sides, making it possible to keep the height of rooms to 10 ft. 3 in. floor to floor.

Cloaks and lavatories are provided on the ground floor immediately adjacent to staircases for direct access from upper floors. Book and shoe lockers are placed in the corridor space adjacent to each classroom.

The main foyer is spacious, and the principal and administration are placed on the first floor reached by two stairs at each end of the foyer, and access to the various rooms is by a gallery open to the foyer space. The main hall, which accommodates 1,400 seated, or the whole school standing, is designed for music and speech with a simple arrangement for adaptation to stage shows.

Four 800 sq. ft. classrooms grouped round the circulation space at the intersection of the north block provide dining accommodation. These classrooms, which have sliding and folding screens to the circulation space on the first, second and third floors, are opened up into one large space at meal times to provide dining space for one-third of the school at each sitting. The kitchen is at first floor level with services to each of the three floors.

The teaching staff and library are placed in a central block connected to the south and north wings. Art rooms are on the third floor with direct connection to the stairs.

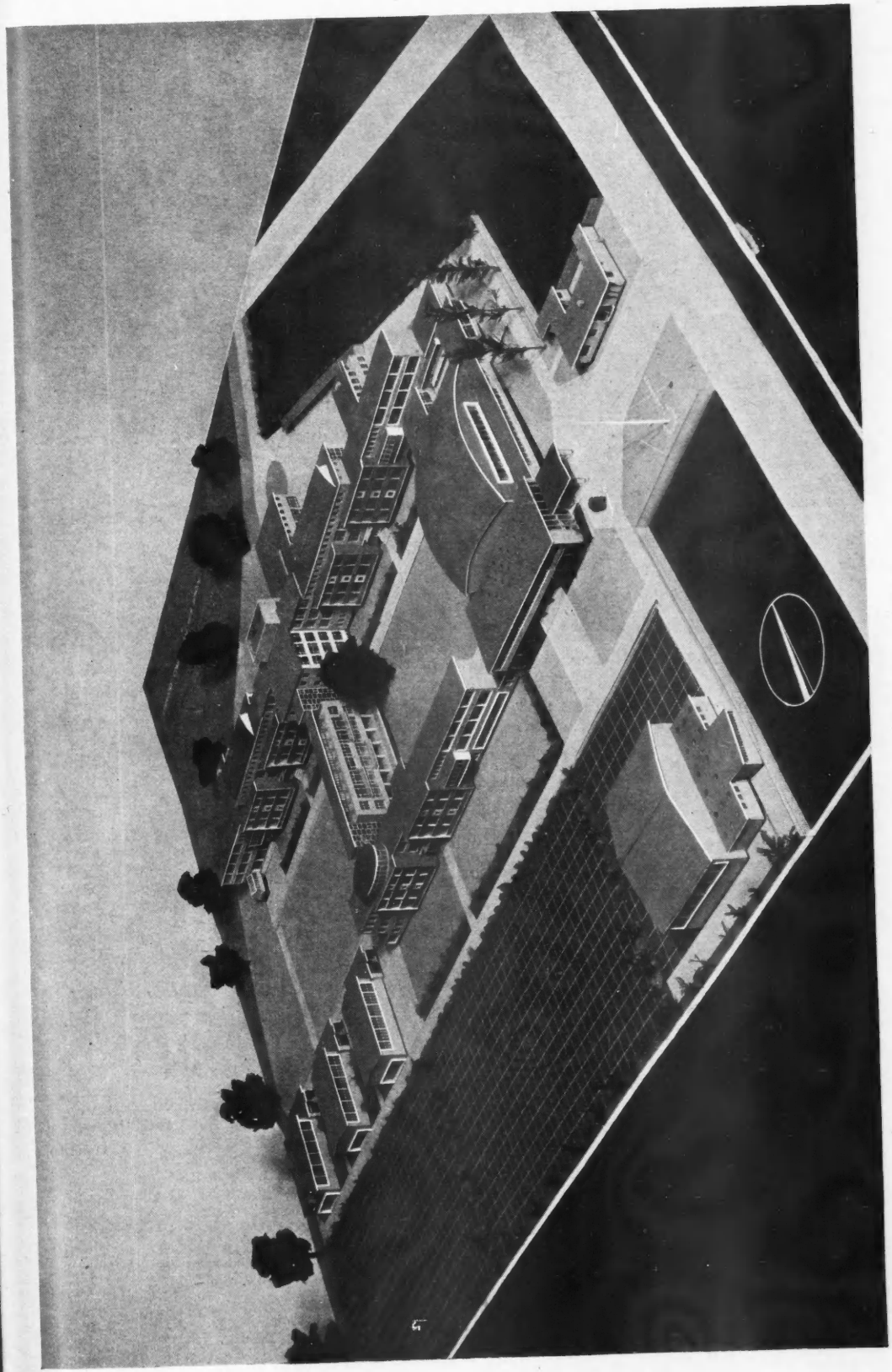
A reinforced concrete frame was chosen as the most economical form of construction. The large hall is to have a shell concrete roof about 3 in. thick and needs no other support in covering a space of 75 ft. by 113 ft. A suspended plaster ceiling fixed to steel hangers (from the shell concrete) will be shaped to acoustic requirements.

The facing material is generally a warm yellow brick, while wood shingles and coloured tiles are used occasionally for emphasis. The windows are of steel.

Heating will be provided by means of four boilers using coal-tar fuel. General classrooms will be heated by continuous wall-panel radiators placed under the windows; practical rooms by warm air connector units; and the hall by panel background heating and a separate auxiliary system injecting warmed air at high level, a method that is flexible and permits a quick rise in temperature.

The partner in charge of the job is Mr. Charles Pike, A.R.I.B.A. His assistants are Messrs. H. C. Wilson, A.R.I.B.A., A.A.Dipl., and G. E. Rothen, B.A., A.R.I.B.A. The consulting engineers are (*a*) structural: Ove Arup and Partners; (*b*) mechanical and electrical: Edward A. Pearce and Partners. Advice on acoustics was given by the B.R.S.

The contractors for the foundations are J. Garrett and Son, Ltd.; and the superstructure contract has been let to Gee, Walker and Slater, Ltd.



General view from south-east.

KIDBROOKE LCC COMPREHENSIVE HIGH SCHOOL, BALHAM HILL

A block of four houses on the Wayfield estate.

LOW-COST HOUSING AT CHATHAM

H. D. PEAKE, MSc(Eng.), AMInst.CE, BOROUGH ENGINEER AND SURVEYOR

J. A. T. RICHARDS, FIAS, DEPUTY SURVEYOR

AN interesting experiment in low-cost housing has been undertaken by Chatham Borough Council. Contracts for a total of 144 houses of the type illustrated above, which are built in blocks of four, the intermediate houses containing three bedrooms and the end houses two, have been let by Chatham Council to five building contractors. So far 124 of these houses have been completed on the Wayfield housing estate. Following are details of the size of the houses, materials used in their construction, services provided, costs, etc.

	END HOUSES (2-BEDROOM)	Super ft.	INTERMEDIATE HOUSES (3-BEDROOM)	Super ft.
Ground floor—				
Living-room ..	12′ 6″ × 11′ 7½″	145	12′ 6″ × 11′ 7½″	145
Dining area ..	9′ 2″ × 9′ 3¼″	85	8′ 8″ × 9′ 2¼″	80
Kitchen and larder	9′ 2″ × 9′ 3¼″	85	9′ 10″ × 7′ 8″ (later reduced to 71 sup. ft.)	75
First floor—				
Bedroom No. 1	11′ 11½″ × 9′ 7″ and door recess	139	12′ 10½″ × 9′ 9″ plus recess	137
Bedroom No. 2	11′ 10½″ × 9′ 2″ and door recess	117	9′ 2″ × 9′ 3¼″ and door recess	110
Bedroom No. 3		—	7′ 0″ × 10′ 3″	72
Total of living space		571	(later reduced to 615 sup. ft.)	619
Total of superficial floor area		754		855
Outbuildings		75		75
Total		829		930

(The floor areas of the individual rooms have been adjusted to include wardrobes and other built-in cupboards, etc.)

CONSTRUCTION

The houses are of traditional construction, the room heights being retained at 8 ft. *Walls.*—External walls are 11 in. cavity load-bearing brickwork; all the party walls including those to the access passage are 9 in. solid. The external leaf to the containing walls of the block is constructed in Eastwoods medium sand faced bricks, partitions being constructed in common stocks or 3 in. thick breeze partition blocks.

Floors.—The ground floor is 6 in. thick concrete on 6 in. hardcore, with ¾ in. red granolithic cement paving finish to kitchen and hall, and ⅝ in. brown pitch mastic paving on felt to living-room and dining recess. The first floor consists of 1 in. tongued and grooved flooring on 7 in. by 2 in. and 6 in. by 2 in. joists. A 4 in. reinforced concrete flat with three-ply Ruberoid is provided over the hall to the two-bedroom houses.

Roof is of timber at a 35 deg. pitch, 3 in. by 2 in. at 18 in. centres, rafters, struts, and ceiling joists, covered with felt and double Roman concrete roofing tiles. *Windows* are rustproofed standard metal frames built directly into the brickwork. *Lintols to windows* in concrete with combined lintols and hood over back doors. *Rainwater goods* are of asbestos concrete, 4 in. dia. half-round eaves gutters and 3 in. dia. rainwater pipes. *Cupboards.*—The kitchen contains a broom cupboard, dresser and cupboard units 3 ft. 6 in. wide, and a built-in wardrobe is provided to the one bedroom in each house. *Doors* are standard sizes, external 2 ft. 9. by 6 ft. 6 in. internal 2 ft. 6 in. by 6 ft. 6 in., and larder and wardrobe doors 2 ft. by 6 ft. 6 in.

The No. 2 Ideal Neofire, fitted in living-room, heats radiators in the dining area and No. 1 bedroom. Simplicity in plumbing carried out in copper tubing is obtained by the use of "Rolyat" recessed pattern 30 gal. calorified type hot water tank in the linen cupboard. Gas points are provided for a cooker, copper and water heater in kitchen, a Neofire in the living-room and for a water heater in the bathroom. One electric lighting point is provided in each room, hall and landing (with two-way switches); 7 amp. points are fitted in kitchen and living-room, 13 amp. points in dining-room, living-room and all bedrooms. An electric cooker point is not provided.

Footpaths.—3 in. thick concrete paths are laid to front doors and along flank walls to outbuildings. *Outbuildings.*—4½ in. brick walls, 3 in. waterproofed concrete roof and floors (spade finish) containing fuel store 2 ft. 6 in. by 5 ft. 6 in., cycle shed 8 ft. by 5 ft. 6 in., and external w.c. *Drainage.*—Front roof water to

sumps and rear roof water and sewage to 6 in. sewer at rear of terrace included in building contract. *Fencing.*—Chestnut split fencing 3 ft. high is provided to separate rear gardens, open forecourts in front. *Decorations.*—All ceilings and plastered walls twice distempered; internal and external woodwork received three coats of paint on the primer. Internal and external metalwork was given two coats on a red lead primer.

COSTS

Tenders were originally invited for four blocks of four of type K/49 houses in June, 1949, and that submitted by Messrs. C. J. Howard and Son, Ltd., in the sum of £18,388 (or an average of cost of £1,149) was approved by the Ministry of Health in August, 1949, the construction of the houses being commenced in October, 1949. It was decided to delete the external w.c. in the outbuilding to the two-bedroom houses of the blocks, reducing the outbuilding area to 60 super ft., and negotiations were commenced with the above contractors and four other firms for the erection of further houses of this type on an amended bill of quantities at a cost of £4,517 per block, or an average cost of £1,129 per house. A total of 136 houses were let in contract at this figure over the period August, 1949 to December, 1950.

Wayfield estate, lying in the North Downs, presents many problems owing to the difficult contours of the site, and accordingly the bills of quantities prepared by Messrs. Stoner and Sons, quantity surveyors, who are also engaged by the Council to complete these contracts, allow for 2 ft. 6 in. deadwork, stepped ridges, excavation for groundwork, for what might be considered an average site on this undulating estate.

In an endeavour to combat continual increases in prices of materials and rates of wages, alterations have been made from time to time in the specification to reduce costs. Only two of the eight contracts for type K/49 houses have so far been completed (contractors in both cases, Messrs. C. J. Howard and Son, Ltd.), the final cost being:—Contract 41—Sixteen houses, £16,053 5s. 5d., or £1,003 6s. 7d. per house. Contract commenced October 10, 1949, completed September 12, 1950. Contract 50—Twenty-eight houses, £28,639 15s. 3d., or £1,022 17s. 0d. per house. Contract commenced April 13, 1950, completed March 2, 1951. The difference between the tendered and completion figures is due to (*a*) variations in specification made at different times during progress of contracts, and (*b*) savings on the bill of quantities for more level building sites.

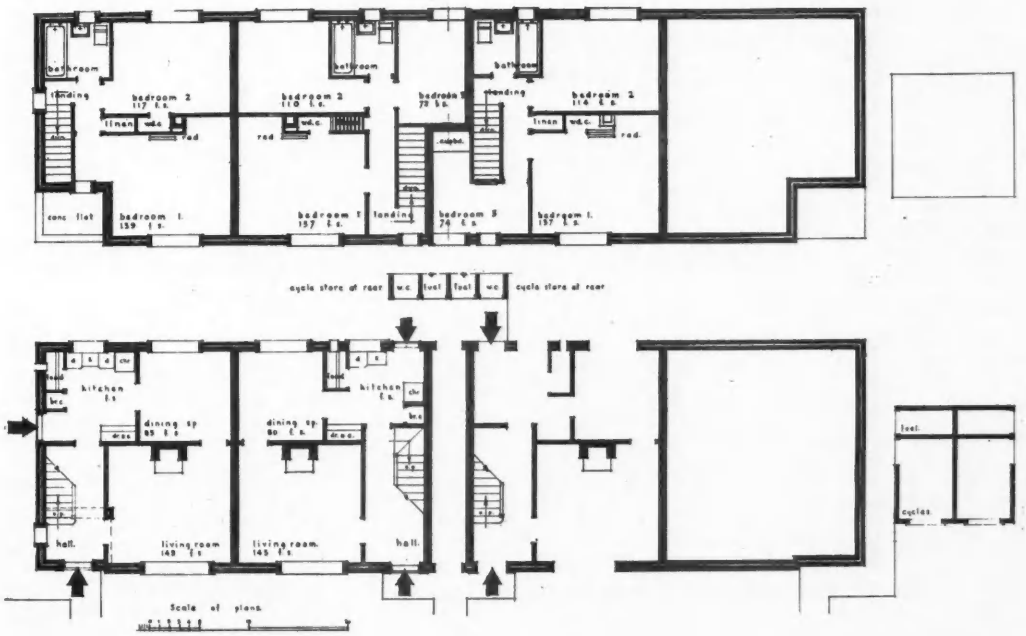
Other factors which have helped to reduce building costs at Chatham are (1) negotiating contracts for small numbers of houses, usually 10 to 20 houses, on the understanding that the contract would be extended by a similar number of houses when progress on the original contract had reached an advanced stage. (2) Because the Council has left entirely in the hands of the borough engineer the negotiation of contracts, decisions can be made to let contracts to those builders capable and ready to proceed with the erection of further dwellings. By this method, no time is lost in awaiting approvals by committees or Council, and all details regarding variations from original approved plans and specifications can be dealt with immediately, and advantage taken of the most economical available materials at all times.

(3) Maintenance of confidence and co-operation between the contractor, the Council's staff and the Ministry of Housing and Local Government. (4) The inclusion of Chatham in Grade A1 of wage rates.

Plans for a further 70 of this type of house on the Weeds Wood estate have been further modified, and will be built in blocks of four, six, eight and one of 14. The ceiling heights have been reduced to 7 ft. 9 in. on the ground floor, and 7 ft. 6 in. on the first floor, but cavity party walls have been adopted to improve sound insulation, as the increase in cost over 9 in. solid is slight; the external w.c.s have been omitted altogether from the outbuildings. In view of anticipated demands from future tenants, dwarf walls and fences will be provided to front gardens.

Other plans recently approved by the Council provide for a store within the containing walls of the dwelling, similar to proposals contained in Ministry of Housing and Local Government Circular 70/51.

In connection with these schemes, the Borough Engineer and Surveyor received valuable assistance from his Deputy, Mr. J. A. T. Richards, F.I.A.S.; his Chief Architect; and Mr. T. Dixon, L.R.I.B.A., Assistant Architect.



Model made by Department of Health's modeller

View of model showing proposed redevelopment of the Clydebank central area.

REDEVELOPMENT OF CLYDEBANK

SAM BUNTON, LRIBA, ARIAS, AND ASSOCIATES, CONSULTANT ARCHITECTS

THE only remaining undeveloped land within the boundaries of the Burgh of Clydebank is what has come to be known as the Central Redevelopment Area. From the end of the war up to the middle of last year, 5,000 permanent houses were built by the Town Council in various other parts of the Burgh. The total number of houses in the central area before the war amounted to some 2,570, over 2,000 of which were totally destroyed or damaged beyond repair during the war. The Council decided that this area would be cleared, re-planned afresh and provision made for 1,700 houses in blocks of flats of varying heights from four to 10 storeys.

The cross-wall multi-flat system has been presented as a method of construction which imposes minimum demands on land, services, basic building materials and skilled labour. It is aimed to prove that by a new planning and constructional technique, building into the air is the cheapest and soundest form of providing homes. This system of building is being adopted, not only at Clydebank, but also in other parts of Scotland. One scheme, proposed for the Gorbals district of Glasgow, was noted in *The Builder* of Dec. 4 last.

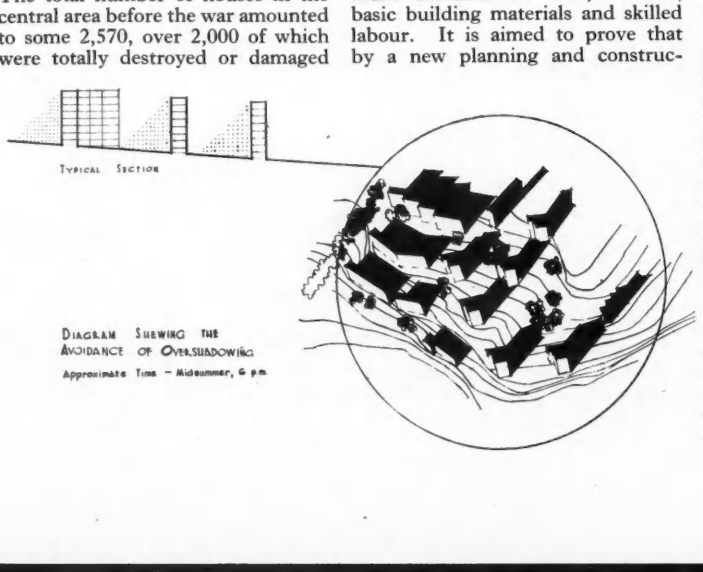


Diagram Shewing the Avoidance of Overshadowing
Approximate Time – Midsummer, 6 p.m.

Provost Alexander Braes writes of the Clydebank scheme :—

" The Central Redevelopment Area is situated in a prominent part of the town, and in actual fact, is one of the most excellent sites in the Clyde Valley ranging in an elevation from 40 to 210 ft. above sea level. The general outlook is south over the river Clyde and stands high above the industrial part of the town which stretches along the north bank of the river. The sloping nature of the ground provides a natural contour feature on which multi-storey dwellings take advantage of the outstanding outlook and view, and enables the blocks to be so positioned as to obtain the maximum degree of sunlight. The spacing of the blocks and the variety of building heights

are such as to ensure that overshadowing is reduced to an absolute minimum."

In replanning the area, the fullest endeavour has been made to retain the existing roads and services consistent with modern planning principles and, of course, with resultant economies in relation to the provision of roads and services. Approximately two-thirds of the existing road pattern has been retained and there have been minor adjustments to suit the pattern of the new plan.

In addition, considerable care has been taken to ensure that underbuilding is maintained at a minimum figure. The types and sizes of the houses range from one to four apartments based on flat, maisonettes and tower design from four to 10 storeys high. A district heating plant will provide space and domestic heating for the entire development and the Town Council have appointed as their consultants for this work, Messrs. Kennedy and Donkin, of London.

Since the redevelopment area is, in fact, a new town centre, communal, religious, educational, commercial and other social requirements, are provided. The Council's consultant architects are Messrs. Sam Bunton and Associates, and the consultant engineers Messrs. F. A. McDonald and Partners, Glasgow.

In addition to the central redevelopment area, the Council have already extended their Burgh and are in process of developing a large neighbourhood unit to the north of the town which contains around 2,200 houses, 1,200 of which are also based on the multi-storey designs here illustrated.

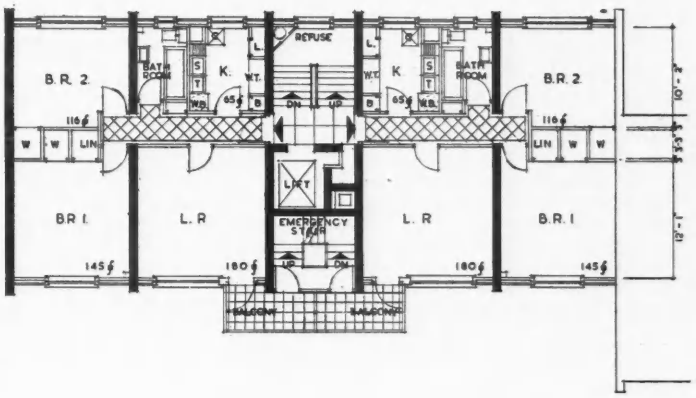
In the first instance, the Council made it quite clear to their consultant architects that the Burgh could only agree to the erection of multi-storey flats if the costs were comparable with those of normal two-storey dwellings and that there should not be any reduction of standards of accommodation or amenity essential to these types of dwellings. The scheme now produced shows how the architects and engineers, together with their associate consultants, have striven successfully to achieve a highly advanced standard of design, construction and subsequent low cost for dwellings of this type.

COMPARISON OF COST

Experience in Glasgow points clearly to the fact that the tender cost of a three-apartment cottage house based on to-day's current prices at £1,400 jumps to over £2,000 per house when the additionally described works are added to the tender cost. By comparison, the cost of a three-apartment multi-storey flat to the new designs based on a scientific approximation by a qualified chartered surveyor, is in the region of £1,720 per house inclusive of the facilities inseparable from this type of development.

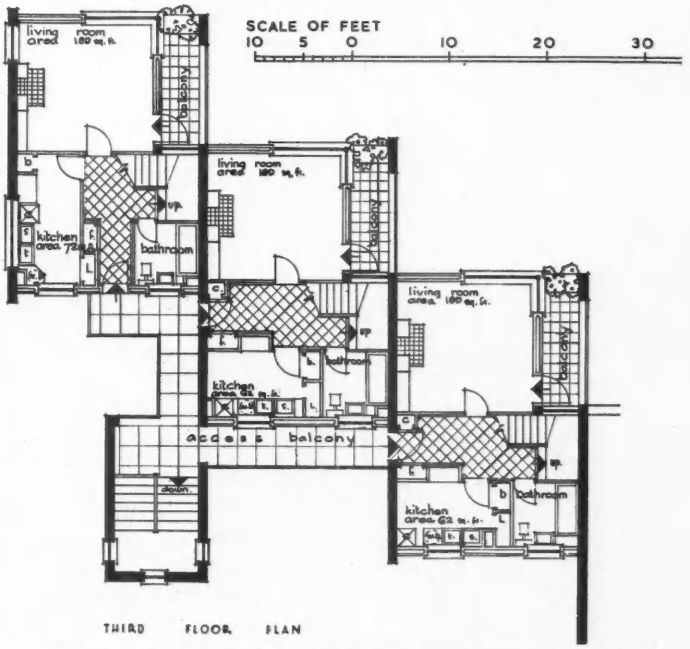
To complete the picture, additional account must be taken in the development of suburban estates of the cost of schools, libraries, shopping centres, community centres, recreational and other social requirements. Detailed study reveals that those essentials, based on a 10,000 population unit, result in a further expenditure of around £1,000 per house which really raises the cost of the three-apartment suburban cottages to £3,000 per house.

The system has fairly wide application, but it is used most suitably and economically for high blocks of flats from four to 15 storeys in height, employing supporting cross-walls. The cross-walls are constructed of a special hollow block with cross ties of the kind manufactured by the Wilson Manufacturing Co., Ltd. The blocks consist of two 1¼ in. slabs spaced 4 in. apart, bound together with reinforced concrete wall ties. The blocks are generally 9 in. deep by 18 in. long, and when they have been built up to a height of from 2 ft. 3 in. to 380 in., a light mesh reinforcement is



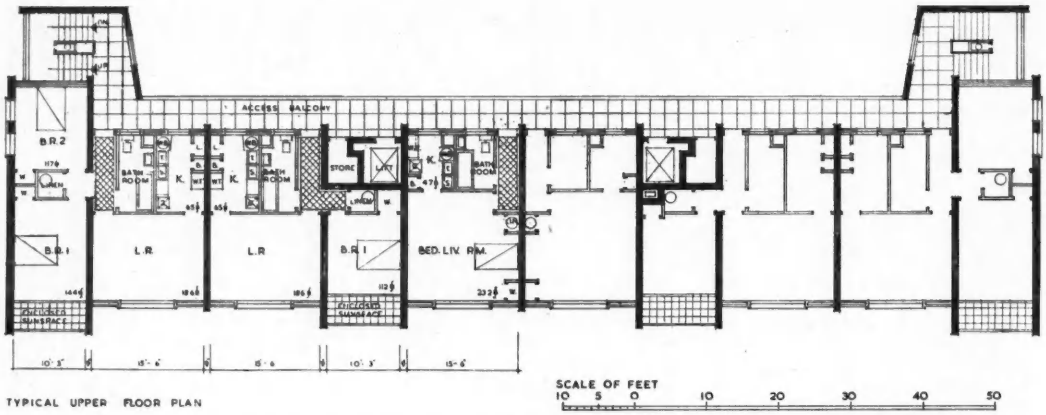
TYPICAL UPPER FLOOR PLAN

Type "B" three-apartment flatted houses eight to ten storeys high.



THIRD FLOOR PLAN

Living-room floor of four-apartment cottages in serrated form four storeys high.



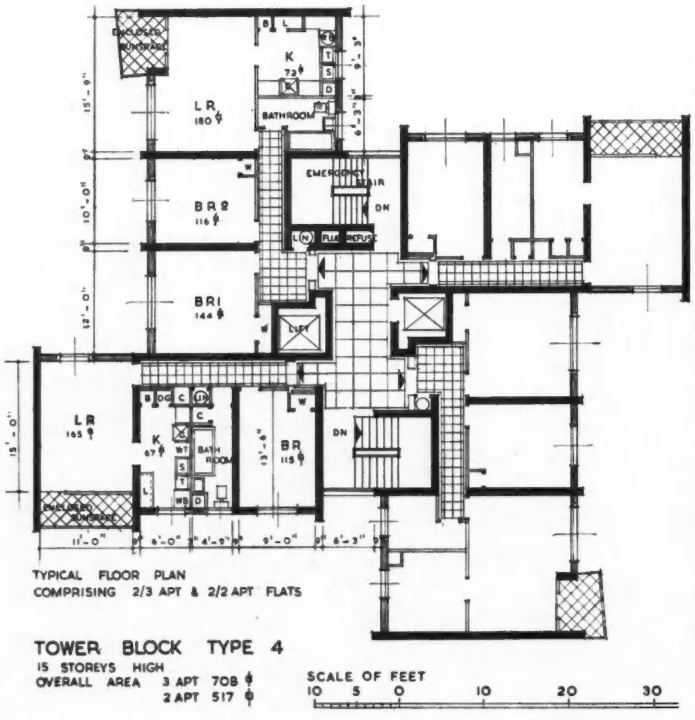
TYPICAL UPPER FLOOR PLAN

Mixed block containing single-, two- and three-apartment flatted houses six to twelve storeys high.

inserted in the cavity which is then filled in with concrete of high strength. In this way, the walls are built up to the soffit of the floor or roof and then 2 in. thick by 6 in. wide prestressed concrete planks are laid between adjacent cross-walls with a bearing of $1\frac{3}{4}$ in. on the walls.

A nailable strip is located on the outside leafs, which enables the block to be finished with plasterboard and these combined factors serve to establish a unit which (*a*) is a concrete shutter, (*b*) is substantially loadbearing, and (*c*) so designed as to become a dry finished partition or party wall.

An outstanding advantage is the complete elimination of costly shuttering. The prestressed planks, which have interlocking edges, are sufficiently strong to carry their own weight across spans up to 18 ft. and when they have been laid in position a line bearing is provided in the middle of the span by means of an R.S.J., which is supported at suitable intervals by specially constructed props. The level of the props are accurately controlled by screw jacks, and the planks are jacked up slightly so that the top surface at each bearing wall and mid-point of support is at one level. No props or jacking are necessary in spans up to 14 ft.



TYPICAL FLOOR PLAN
COMPRISING 2/3 APT & 2/2 APT FLATS

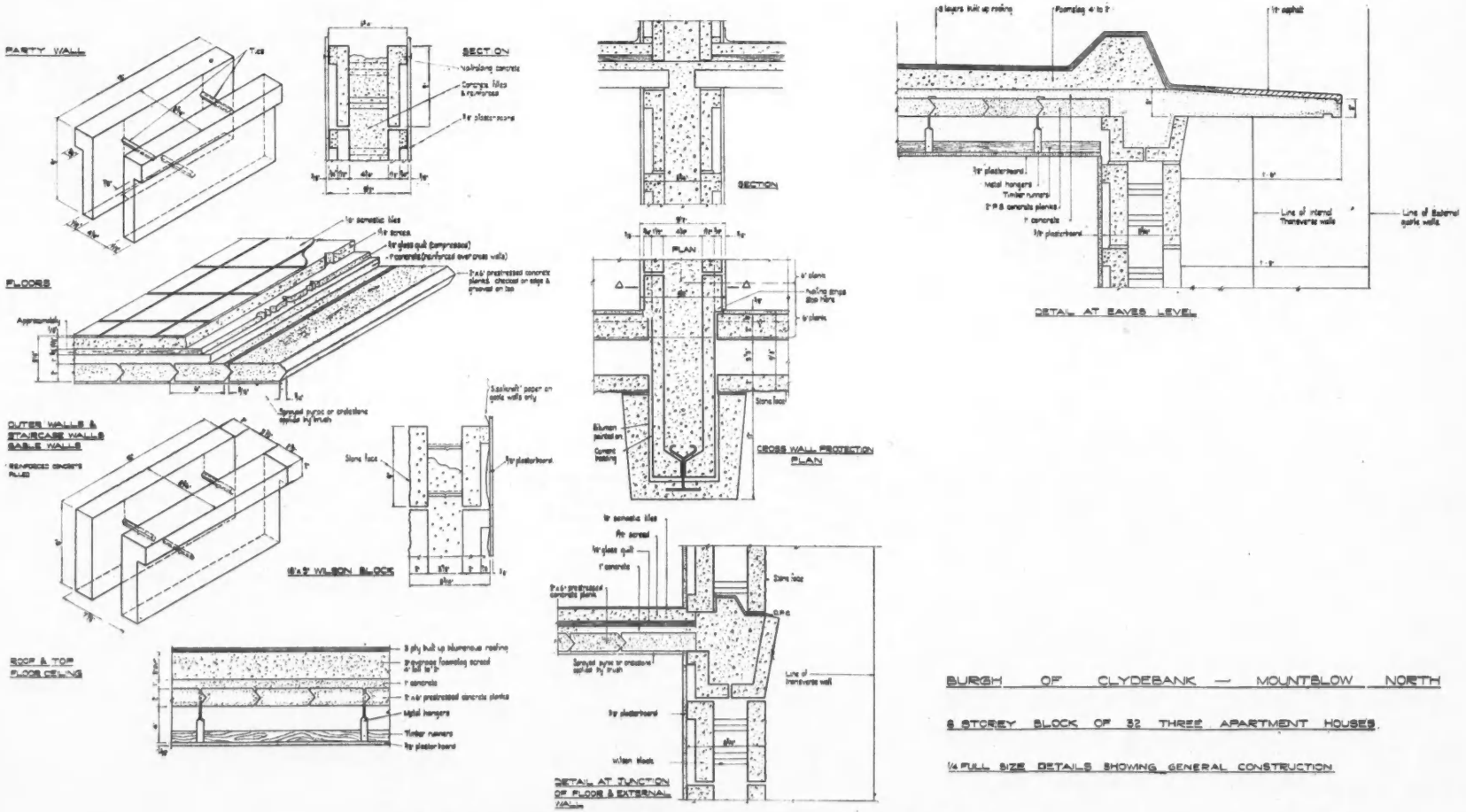
TOWER BLOCK TYPE 4
15 STOREYS HIGH
OVERALL AREA 3 APT 708 ft
2 APT 517 ft

SCALE OF FEET
10 5 0 10 20 30

Light reinforcement is then placed over the cross-walls and a 1 in. thickness *in situ* top slab of good quality concrete is laid on top of the planks forming a floor of 3 in. total depth. The planks have a grooved pattern on top face to ensure good bonding with the *in situ* concrete slab. In the case of 18 ft. spans, when the *in situ* concrete has hardened sufficiently, the props are carefully lowered. As the upper face of the prestressed concrete planks have been subjected by bending to tensile forces reducing the amount of pre-compression, there is a tendency to revert to its former state, but this is resisted by the thickness of *in situ* concrete above.

The effect of the inter-action between the lower and upper slabs is to reduce tensile stresses in the top surface of the upper slab which counteracts the compressive forces brought into play by the lowering of the slab as the props are being removed. It will be realised that this system of construction, embodying several kinds of prestressed and poststressing, is very economical and enables large spans to be constructed with very small thicknesses of slabs, thus resulting in a reduction of dead weight. While no shuttering at all is required, the final structure is designed to possess all advantages of a monolithic construction.

The prestressed planks are most effective in saving cement as compared with normal dense concrete and are, moreover, in these times of steel shortage, extremely economical in the use of reinforcing bars, etc. Another important point is a saving of 3 in. in the floor depth as compared with traditional poured concrete methods. In a 10-storey block this reduces the height of the building by approximately 4 ft., which obviously amounts to a considerable capital sum.



BURGH OF CLYDEBANK — MOUNTBLOW NORTH

8 STOREY BLOCK OF 32 THREE APARTMENT HOUSES

¼ FULL SIZE DETAILS SHOWING GENERAL CONSTRUCTION

REDEVELOPMENT OF CLYDEBANK : Constructional details of eight-storey block.

CHILDREN'S HOME, LISVANE

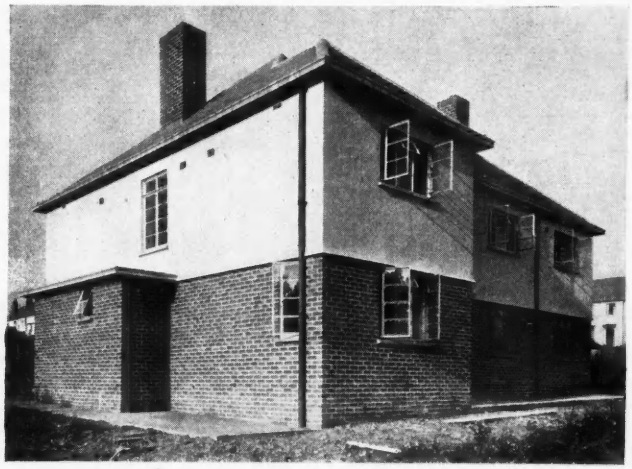
GERALD STANLEY & GIDDINGS, F/ARIBA, ARCHITECTS, WITH L. R. GOWER, FRIBA (COUNTY ARCHITECT)

THIS new children's home at Lisvane, near Cardiff, has been built for the Glamorgan County Council in a small housing estate.

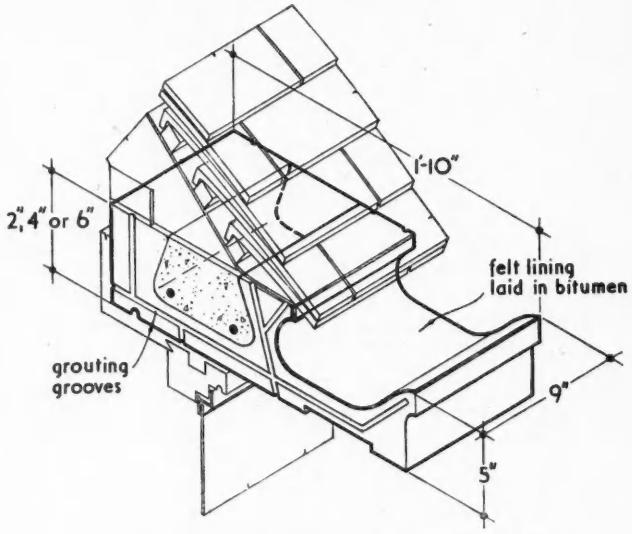
An unusual method of construction was adopted which did away with the need for outside scaffolding. The house was built up to first floor level from trestles, and from first floor level to eaves from trestles placed internally on the floor joists. "Finlock" "N"-type gutters were laid from the inside of the building and roofing work was carried out off them. This was the first time the builder had used this type of guttering. Construction is 11 in. hollow walling with "Cullamix" cream rendering, Tyrolean finish, above facing brick to ground floor, with cream pointing to exposed brickwork. The roof is covered with Cotswold grey tiles.

The quantity surveyor was Mr. G. A. Downie, A.R.I.C.S., the builder being Mr. R. E. Mallett, of Gabalfa, Cardiff.

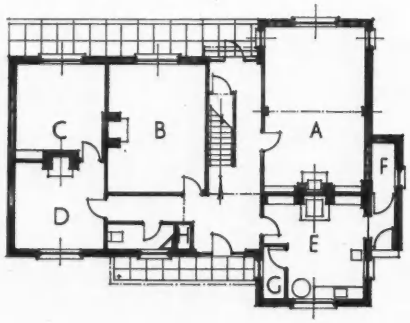
The sub-contractors were: Electrical, J. O. Fearby, Cardiff; tiles, Marley Tile Co.; concrete gutters, Finlock Gutters, Ltd.; external rendering, Cullamix; facing bricks, Cardiff Brick Co.; windows, Rowe Bros.; flooring tiles, Tondu Brick and Tile Co.; flooring (Semastic tiles), Semtex, Ltd.; paints, Lewis Berger (Gt. Britain), Ltd.; sanitary goods, Shanks and Co., Ltd.; and purpose-made joinery, Price Bros. and Co. (Penarth), Ltd.



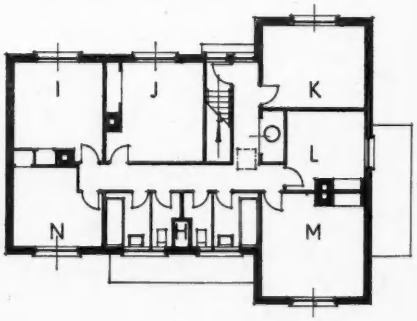
A general view of the home.



Detail of the gutter showing section through cast-in-situ lintol.



GROUND FLOOR



FIRST FLOOR

KEY.—GROUND FLOOR: A, living and playroom; B, dining-room; C, foster parents' bedroom; D, foster parents' sitting-room; E, kitchen; F, fuel store; G, larder; H, duct. FIRST FLOOR: I, bedroom 4; J, bedroom 3; K, bedroom 2 L, isolation room; M, bedroom 1; N, bedroom 5; O, linen cupboard.

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STEEL ALLOCATION

Scheme to be Reintroduced on February 4

A REMINDER has been issued by the Ministry of Works about the allocation of steel for building. As already announced by the Ministry of Supply, the *steel allocation scheme is to be reintroduced on February 4. The detailed arrangements for allocation of steel for building, issued last October [reproduced in full in *The Builder* of October 19, page 522], will be unaltered, apart from the change of date.

Applicants for steel authorisations for work in progress, who have already sent in Form MOW. 2065, are not required to re-submit this application. They are being asked for additional information in individual cases where necessary, and I.S. authorisations are now being issued.

Any architect or contractor requiring building steel after February 4, 1952, who has not already notified his requirements to the appropriate authority, is reminded that he should do so without delay. This includes steel for which D.O. and P.T. symbols have been awarded.

The appropriate authorities are:

For work done under a building licence (other than housing), the Ministry of Works regional licensing officer.

For housing, the local authority.

For schools, the local education authority.

For all work for Government departments, nationalised industries, local authorities, regional hospital boards, etc., the authority for whom the work is being done.

All future applications for building licences must show the quantity of steel required.

Types of Steel Involved

In general, the allocation scheme will be the same as that which was in force until May, 1950, except that alloy steel will be controlled under a separate scheme and cast iron will not be included in the allocation arrangements. It will apply to the following types of steel:

Ingot ;
Billet, bloom, slab ;
Sheet bar, tinplate bar ;
Plate—Heavy (that is, 3/16 in. thick or thicker), medium (that is, under 3/16 in., but not less than 3 mm. thick), (and whether coated or uncoated) ;
Sheet (that is, under 3 mm. thick, but 18 in. wide or wider), (and whether coated or uncoated or coiled or not coiled or cut or not cut in lengths), other than sheet having guaranteed specified electrical properties;
Tinplate, terneplate, blackplate, silver-finished plate ;
Angle, channel, tee, joist, piling section, other sectional material (but being in every case unfabricated) ;
Round, rod, square, hexagon, flat, other section and shape (and whether black or bright) ;
Rail, sleeper, fishplate, soleplate ;
Hoop, strip (and whether coated or uncoated, and whether hot or cold rolled) ;
Tube, pipe ;
Tyre, axle, disc centre, wheel—for vehicles running on rails or in channels ;
Block for forging, block for pressing, forging, drop forging ;
Colliery arch, and accessories therefore, pit prop ;
Large spring (that is, a laminated or volute or coil spring made either of round rod of not less than 5/16 in. diameter or of other material of a corresponding cross-sectional area) ;
Wire rod ;
Wire (whether plain or barbed) (and whether coated or uncoated) ;
Wire rope, wire strand.

The purchase of manufactured fitments, such as steel windows, cookers and meters, will not require an authorisation. For sheet steel the present arrangements will continue.

*The Statutory Instrument is "The Iron and Steel Distribution Order, 1951," S.I. 1951, No. 2006. Published by H.M.S.O., price 6d.

Official Guide to Scheme

A guide to the iron and steel rationing scheme has been published by the Stationery Office for the Ministry of Supply.

Entitled "Iron and Steel Distribution Scheme—Notes for Consumers," the booklet states the types of iron and steel covered by the rationing scheme and those exempt. The latter include non-alloy iron, high-speed steel, sheets with specified electrical properties, and most castings.

It describes and illustrates authorisation forms needed to buy, sell and use iron and steel covered by the scheme; a list is given of those goods for which such forms are not required from consumers.

A quick reference table of the Government departments which can sanction the use of steel, showing the industries for which they are responsible, enables consumers to find at a glance the department to which they should apply.

Under the rationing scheme, small quantities of some materials can be bought each month free from control. The types of material and the amounts which can be acquired are listed, and the certificate needed when such purchases cost more than £1 is reproduced.

The "small consumers' scheme," under which firms who use less than 25 tons of iron and steel in each period may receive their allocation from Ministry of Supply regional controllers, is summarised.

The booklet is on sale at Stationery Offices, price 1s.

STEEL DISTRIBUTION SCHEME

Small Quantities Exemption

IN Circular No. 1/52, the Minister of Housing and Local Government refers to paragraph two of Circular No. 59/51 and brings to the notice of all local authorities articles four and five of the Iron and Steel Distribution Order, 1951 (S.I. 1951 No. 2006), which refer to "Small Quantities Exemption." A table showing those materials which are included in Part 1 of the third schedule to this Order, and which come under the category of "Small Quantities Exemptions," is given as an Appendix to Circular 1/52, and is reproduced below:—

NOTES FOR CONSUMERS

Category	*Description*	*Quantity (per month)*
(i)	Heavy plates (*i.e.*, $\frac{1}{8}$ in. thick or thicker) coated or uncoated; sections, joists, and bars, not included in Category (iii) ...	1 ton
(ii)	Medium plates (*i.e.*, under $\frac{1}{8}$ in. but not less than 3-mm. thick) coated or uncoated	10 cwt.
(iii)	Sections 4 united inches and under; channels 3 in. web and under; joists under 3 in. rounds, squares and hexagons under 3 in.; flats 5 in. wide and under	1 ton
(iv)	Sheets (*i.e.*, under 3-mm. thick but 18 in. wide or wider) coated or uncoated	10 cwt.
(v)	Tinplate, terneplate, black plate, silver finished plate	10 double boxes or 1 ton
(vi)	Hoop and strip	10 cwt.
(vii)	Tubes and pipes	15 cwt.
(viii)	Forgings	1 ton
(ix)	Drop forgings	1 ton
(x)	Wire (whether plain or barbed) (and whether coated or uncoated)	5 cwt.
(xi)	Wire rope: wire strand	5 cwt.

STEEL FROM AMERICA

Mr. Sandys' Comments

MR. SANDYS, Minister of Supply, commented at the English Electric Company's works at Preston on Monday on suggestions that the Government are withholding steel supplies from industry in order to accumulate stocks. Referring to possible supplies from the United States, he said he was not in a position to state any figure.

Mr. Sandys said: "I wish we had something up our sleeves. I am afraid we have not. If we had a stockpile we should certainly hand it out. I would like to have a reserve from which to improve steel allocations."

There had been unfounded optimism among firms engaged on exports that allocations would resolve all their problems by making steel available. There were few firms not engaged to some extent on exports, the defence programme, or essential home needs, and it was impossible to exempt from any cut in steel allocations all the firms so engaged. The Government would try to see that any cut was borne by the less essential elements. In the past six or nine months firms had been dipping more and more into their stocks. No allocation scheme could enable works to carry on consuming at a rate greater than the rate of their deliveries. If a cut of 15 per cent. were imposed that would be a cut on deliveries; if on top of that a firm had been consuming additional quantities from stock, perhaps another 15 per cent., that would make the total 30 per cent. That was why so much dismay was being expressed.

The Ministry would do its best to rectify in the second period allocation any unbalance shown to exist in the first period. The first period allocation, beginning next month, would cover two months. The Ministry was hoping to announce the allocation for the second period—covering three months, beginning on April 1—very soon after the first period began. It was hoped that firms would know what they could count on for five months ahead.

Speaking about help from the United States, Mr. Sandys said any additional steel that Britain might get from America over and above what she had hoped to get would be a great help, but it should not be imagined that American steel would come to us so quickly that the Ministry would be able to make any alteration in the first period, nor did he know to what extent it would be possible to make appreciable increases in the second period.

INFORMATION IN INDUSTRY

New Aslib Venture

MUCH of the success of the drive for industrial productivity depends on the speedy provision of accurate information in the scientific and industrial fields. Recognising this fact, the Department of Scientific and Industrial Research has recently made available to Aslib a special grant to establish a consultant service in the special library and information field.

This service, drawing upon the existing resources of Aslib, and backed by new research into information techniques, is now available to advise those who are considering the establishment of special libraries and information services in industry and research establishments, and to assist the development of existing services. Details regarding this service and other facilities provided by Aslib can be obtained from the Director, Aslib, 4, Palace-gate, London, W.8.

SCHINKEL

Dr. Pevsner's Paper at the RIBA

KARL FRIEDRICH SCHINKEL, the distinguished early nineteenth-century German architect, was the subject of a lecture given at the R.I.B.A. on Tuesday, December 11, by Dr. Nikolaus Pevsner, M.A., Ph.D., F.S.A., Hon.A.R.I.B.A.

The President, Mr. A. Graham Henderson, A.R.S.A., was in the chair. The lecture was illustrated by a large number of lantern slides.

In his introductory remarks the lecturer said that it was doubtful whether the history of architecture could at any period be treated in exclusively national terms. For no time would such treatment be less possible than for the last 200 years. From 1760 onwards the history of architecture in the West developed as a Franco-Anglo-German alliance—or Anglo-Franco-German, or Germano - Anglo - French. Any neglect of that fact would seriously impair the results of any national scholarship. Having referred to the influence of a group of French and English architects of the latter part of the eighteenth century — Boullée, Weilly and Peyre, Antoine, Ledoux, Gondouin, Brongniart, Chalgrin, Dance and Soane among them, whose inspiration came from Rome, seen through the eyes of Piranesi, and via the Palladian - Burlingtonian achievement of England — in producing the classical revolution " at a time when France and Germany still revelled in a delicious Rococo, sometimes frivolous, but sometimes of inspired frenzy," the lecturer said that to find genius we had to go to Berlin and look at the drawings of Gilly, who, born in 1772, died of consumption as early as 1800. Gilly and Paris were the chief sources of Schinkel's style in architecture.

There were two sides to Schinkel's character. He was a painter and a stage designer, and a designer of panoramas. He was also Gchesiur Oberbaurat at the age of 34. He was an honorary member of the Academies of Prussia, Denmark, Rome, Bavaria, Russia, Austria and Sweden, and an honorary member of the Institute of France and of the Institute of British Architects—in fact, he was made an honorary member of that Institute as early as 1835, and was one of the very first batch of honorary members ever made by the British Institute.

Karl Friedrich Schinkel was born in 1781. He was the great-great-grandson of a cloth shearer, and a great-grandson, grandson and son of Prussian Lutheran pastors. At his grammar school he recommended himself " by a staid and modest behaviour and by laudable industry." He was taught architecture by an able civil servant, David Gilly, who came from a French family which had migrated with the Huguenots to Berlin at the end of the seventeenth century. But Schinkel owed very much more to the brilliant son of David Gilly, Friedrich Gilly. In a letter to Friedrich Gilly's father, written from Paris in 1804, Schinkel said that, " If anything at all is to develop in me and lead to some progress, I owe these advantages solely to the instructive intercourse I had with him."

IN ITALY AND PARIS

Schinkel went at their expense to Italy and Paris in 1803, at the age of 22. One would assume after this that he went to study Rome, Sicily, and other places. He did see them, but he was equally impressed by the Middle Ages. The general tenor of his letters was curiously calm and even. He used a great deal such terms as splendid, magnificent, wonderful, excellent, but nowhere did he seem to be really carried away. He certainly used those terms for Vienna Cathedral, a building of the thirteenth century, Milan Cathedral (fourteenth or fifteenth century) and for the Sicilian pre-Roman buildings. Nowhere was he very specific in his predilections. The most interesting of his letters went to his master, David Gilly. In it, he said that he was greatly interested in the Middle Ages. " It is characteristic," he added, " that one could make use of the Saracenic style." He saw the brick architecture of the fifteenth century in Ferrara and Bologna, which was going to be of importance to him. He wrote again to Gilly, " This is something which is very useable for us." He spoke in general of the Italian Middle Ages as a style too little observed and appreciated. " When it comes to antiquity," he wrote to his master, " it offers nothing new to an architect because one is from childhood familiar with it."

Then he went back via Paris and he found Prussia under the influence of the depression. 1806 was the year of the Battle of Jena, and the year of the Peace which drew all Prussia west of the Elbe away and gave it to France. There was little work for an architect, and he developed into a successful painter. He painted landscapes, and very soon turned to panoramas. Panoramas were, of course, a craze of the moment.

SCHINKEL'S MASTERPIECES

When conditions improved in Prussia after the Battle of Waterloo, Schinkel suddenly found himself the most sought-after, the most recognised architect of the country, the recognised leader of architecture in Prussia. Then, all that he did, or nearly all, was neo-Grec. In less than ten years he built what had to be regarded as his masterpieces. In 1815 he did the Obserbauret, and in 1816-18 he built the new Guard House for the Royal Guard in Berlin.

" Historically speaking," proceeded the lecturer, " the connection with the Franco-Gilly background is clear. The building is basically a cube. Again, there are parapets, and the slightly projecting and slightly raised angles and stresses and the severely Greek portico placed in front. This was a very elementary cube. When it came to a more complicated building, the Schauspielhaus, the theatre which was finally executed, not to Gilly's designs of 20 years earlier but to Schinkel's designs, in 1820-21, this has a more complex group of forms, arranged symmetrically, with a very successful arrangement in which the main auditorium is balanced by a concert hall and a foyer.

" The style is more elegant. The order used is Ionic ; pediments are introduced, but the severity which Schinkel had in character taken over from Gilly is yet there in what is, perhaps, one of Schinkel's favourite motifs and, as far as I can see, one of the most influential motifs he used. It has the arrangement of bands of very slender, tall windows, separated by completely unmoulded piers or mullions. This group of windows on two storeys, lying back on this form, are, again, even more emphatic or exaggerated. Here is almost a light motif of Schinkel's classical buildings, which we find under his influence in a good many buildings later.

" The concert hall inside is very much more ornate and is perhaps, a first indication that Schinkel indeed belongs to a different generation than Gilly. Gilly would not have resorted to so much decoration ; and if he had, he would have done it differently. Schinkel was keenly interested in design of any detail of furnishings, but it is more than anything a motif like the diagonal cofferings which makes this hall appear no longer of the pure Greek classical type. It is the first element or hint at the coming of the new intricacy.

" What is perhaps Schinkel's most successful building was the Old Museum in Berlin, designed in 1823 and completed in 1830. It reminds us at once of part of the British Museum, which was done 20 years later. In fact, Smirke in a committee meeting defended himself against remarks that he had taken this over from Schinkel The difference is interesting, because Smirke's British Museum façade is still essentially a Palladian building in the eighteenth-century tradition, even if the details are clearly different, for the simple reason that it has a receding back and two projecting wings. Schinkel is entirely uncompromising in this, and has an absolutely straight, smooth, sheer façade, with his order running right through from one square angle pier to the other square pier on the other side. There is no pediment whatever, the whole being crowned by the heavy architrave and cornice, and the centre slightly raised, again with a roof appearing to be completely flat."

By the 1820's, Schinkel was the accepted premier architect. He was so busy not only in Berlin, but in all the provinces belonging to Prussia, Pomerania, Silesia and everywhere that it would be impossible for us to look at the buildings in detail. Some of them were free classical, some of them Gothic.

THEORY OF ARCHITECTURE

Schinkel, said the lecturer, intended to publish a big book on the theory of architecture, and he gave an extract :

> " Utility is the fundamental principle of all building—utility of plan, of construction, of decoration. Utility of plan—— " Schinkel went on to say (this was all very concentrated, and worth listening to) : " means the highest economy of space, the highest order in the arrangement of space, and the highest convenience in the arrangement of space. The principle of construction calls for the use of the best materials, the best treatment and assembly of the materials, and for the most clearly visible indication of the best materials and the best treatment of materials. Utility of decoration calls for the best choice of place for decoration, for the best choice of ornaments, and for the best treatment of ornaments."

Next, we saw what was so typical of the nineteenth century ; we got the break in Schinkel's theory. He himself wrote later some notes for his book on his own experience. He said that so many people had used period forms for architecture, and he felt repelled by the use which architects made of forms of the past. And so he went on to say :

> " We turn to the radical abstraction of developing a work of architecture entirely out of construction and use. But that results in something dry and rigid, and it leaves out two equally important elements : the historic and the poetic."

He ended by admitting that to choose rightly amongst these elements was a matter of feeling and not of romance.

And so there we had entirely the romantic justification for the use of two different principles in architecture as regards two different types of buildings : the combination of the grid and the evocation of Greece. In fact, one might describe the theatre building of Schinkel's by saying that it was where no such evocation of the past was called for that Schinkel went on with this style.

SCHINKEL IN ENGLAND

" Time," continued the lecturer, " does not allow me to say as much as I should like about Schinkel's journey to England in 1826, but it was dealt with quite fully in an article in 1845. The fact is that although he was meant to study museums, he actually travelled with the head of what was called the Deputa-

tion of Trade—that is to say, the Board of Trade of Prussia. That body took the keenest interest in industry, in machinery, in the development of trade, and so on, and in his very detailed notes from London we find Schinkel describing not only what was at the British Museum, but bridges, the Thames Tunnel under construction—he spoke to Brunel about it—and London dock work. He visited breweries, potteries, ironworks, engineering shops, a papier maché factory, spinning mills, and so on ; and he was as an architect immensely impressed by the gigantic mill landscape of Manchester. He had never seen anything like that, and indeed could not have seen it anywhere else. He spoke also of the factories which were seven and eight storeys high.

"In Prussia there was no such history. That arrived later. But his interest in industrial and commercial development shows itself in his later years in Prussia. The heavy industry was perhaps best represented by the State cast-iron works, in which he took a very keen interest. In fact, very early, even generally speaking in the history of cast-iron architecture, the monument in Berlin for the memorial of the Napoleonic Wars (1818-21) was, and is, I think, a cast-iron structure 60 ft. high.

"He also designed on a smaller scale, and a bridge railing for Berlin in cast iron shows Schinkel as an extremely tasteful, precise designer, with a great deal of understanding for the simplicity and smoothness of moulding of casting which was necessary in cast iron foundries.

"After he had been in England he designed two completely iron staircases for Prussian princes. He also designed a damask napkin, to be carried out by a weaver. He designed a great deal of furniture ; and there is a recent book on his furniture. When he did that, he worked, of course, for craft rather than for industry. That is to say, he worked in the eighteenth-century sense rather than the nineteenth-century sense, but as I pointed out elsewhere a year or two ago, his attitude was always the same—nineteenth century, and not eighteenth century.

"In 1821 was begun, until 1837, publication for the Board of Trade of examples for manufacturers and craftsmen, for builders and contractors. In the introduction Schinkel speaks of the necessity of adding perfection of form to technical perfection. His best example, again, is the English Wedgwood. The taste was not entirely antique in this case. He says that the antique style needs adapting to needs, and that ' it would be asking too much from the craftsman to leave the adapting to him. In fact, he must not be tempted to design himself,' and so the Oberbaeurst is doing that for him.

"To Schinkel, that was one of his duties. He took a very conscientious and Prussian view of his duties. If the results you have seen are as distinguished as to my mind they are, that is due particularly to that particular moment in German history, of which I should have said before ' that moment of humanism, of the age of Goethe and Schiller, Schelling, Hugel, and so on.' Never at any moment had there been so many men of real genius in Germany, and men of very high achievement, than at that moment.

"Schinkel was not himself a man of genius. His private life was uneventful. Never would he have made any efforts to break away from the set and accepted routine of his successfully discharged duties. Successful he was indeed, and deservedly so. If he was not a man of genius, he was a man of the highest professional achievements, the best architect of his generation in Europe, the best architect of that peculiarly academic moment of restraint and reflection which was his moment, and which was the last moment in Europe before the onrush of that rich and rather muddy Victorian era."

SPEEDING PAYMENTS BY LOCAL AUTHORITIES

Ministry of Housing Circular

THE Ministry of Housing and Local Government issued on Jan. 10 a circular (No. 2/52) to all local authorities, pointing out that delay in making payments to contractors increases their overhead costs, which may be reflected in subsequent tender prices. The circular embodies the first report of the Local Government Manpower Committee's review of contract settlements by the chief financial officer of the local authority.

The committee commended the procedure, understood to be followed already by many local authorities, of giving the chief financial officer an opportunity to review the contract settlements, either before the technical or professional officer had given his certificate or retrospectively.

The Minister recognises, as did the committee, that the decision to adopt this procedure is one solely for the local authorities, having regard to their standing orders or financial regulations, the circular continues, He considers, however, that it may be helpful to them to know the considerations which underlie this recommendation and are relevant to its implementation.

The chief financial officer's review is intended to deal not with the technical aspects of the contract, but with the accuracy of the accounts. The Minister feels sure that local authorities would agree that the final certificate of the professional or technical officer should not be questioned in respect of any matter placed by the contract within his competence as requiring the exercise of his professional or technical skill and judgment. The object of any such review is to assist the professional and technical officers by using staff, for whom an arithmetical check of accounts is normal routine, to verify the accounts under the contract without any duplication of effort and without in any way detracting from the professional responsibility of the officer giving the certificate. It should be so organised throughout that the aim of saving manpower is achieved.

The general effect of such a check should be to prevent, or remove at an early stage, the difficulties which often arise on, and delay, contract settlements. The check should not be allowed to delay payments beyond the period named in a contract; if, for the larger authorities, the volume of work involved would cause delay in payment, it is suggested that the review should be made retrospectively. Local authorities will appreciate that delay in making payments increases contractors' overhead costs and any such increase may well be reflected in subsequent tender prices.

Midland Builders' Concern

MEANWHILE, the matter of payments is being raised in Birmingham where Mr. W. S. Shirra, chairman of the Distributors of Builders' Supplies Joint Council is taking up the subject of the delays in payments to builders in conection with municipal housing contracts.

Many Midland builders, states MR. SHIRRA, are being seriously embarrassed by delays, sometimes two years long, in the settlement of local authorities' accounts, and statistics show that there has been an increase of four per cent. in the number of builders and builders' suppliers becoming bankrupt in the past two years.

The results are that some builders, fearing postponed payments, add a percentage to cover interest on bank loans; others have a slowed-up programme since, with money tied up, they cannot enter on new commitments; while many, not wanting to part with valuable trained labour, see costs mounting when that labour force is not fully occupied.

Mr. Shirra proposes to call a meeting of the building trade to discuss the problem, and he himself has suggestions to offer for improving the state of affairs, such as the universal adoption of a standard form of accounting.

HOUSING ALLOCATIONS TO LOCAL AUTHORITIES

Mr. Macmillan to Make Early Statement

SPEAKING at a luncheon of the Incorporated Sales Managers' Association in London, on January 9, MR. HAROLD MACMILLAN, Minister of Housing and Local Government, said he hoped soon to make a full announcement on the method of allocating houses from the central Government to local authorities.

Mr. Macmillan went on to say that local authorities need not be at all alarmed at the fact that some of the provisional allocations might have seemed insufficient for their local needs. "These are only instalments while we are organising the full development of building materials and labour essential for the housing drive. Nor will there be any artificial restrictions. We shall build, or allow to be built, as many houses as can be put into production having regard to the materials and labour that can be provided," he said.

Earlier in his speech, Mr. Macmillan had said that, in his view, there had been some fundamental errors made by the central Government in the housing field. The programme had been too rigid, too academic, too pedantically and artificially planned. It had been too rigid because it had not given sufficient flexibility to the local housing committees who were, in his opinion, the best judges of local needs. Of course, he knew there was a school of thought that believed that "The Gentlemen in Whitehall know best."

"All I can say is that this is not the opinion of the gentlemen who now hold the presiding positions in Whitehall," Mr. Macmillan continued. "I have, therefore, as my first step, restored a far greater degree of independence and individual judgment to the housing authorities. Instead of the rigid control of the number of houses which should be built to private account (whether for sale or letting) I have given them a much wider degree of flexibility. I have substituted for the rate to give up to 1 in 5 for private licences up to 1 in 2; that is to say, that if they wish to do so, of the total houses they have to dispose of they can give half to private developers."

The chair at the luncheon was taken by Mr. J. B. Barker, chairman of the London branch of the Association.

NATIONAL WAGE INCREASE

The National Joint Council for the Building Industry on Tuesday conducted the usual annual review of wages under its Agreement and decided that, in accordance with the sliding scale, an increase of 1½d. per hour is due to be operated from February 4 next. Having heard evidence on other matters, including the claim by the operatives for a general wage increase, the Council decided to adjourn for a week.

EVOLUTION OF THE RIBA FORM OF CONTRACT

Past Vicissitudes and Future Problems

THE greatness of the achievement that lies behind the R.I.B.A. Form of Contract, the basis of which is agreement by the mutual consent of architects and builders, was emphasised by Mr. Howard A. Close, M.A., legal adviser to the National Federation of Building Trades Employers, in a paper on "The Evolution of the R.I.B.A. Form of Contract" given at the Royal Institution of Chartered Surveyors on November 21.

MR. CLOSE said he had not been able to trace the beginning of the story, but the publication of the 1909 Form of Contract was certainly a landmark and might perhaps be regarded as the date when the idea of the need of nationally accepted standard conditions of contract began to grow. The first Form of Contract agreed between the builders and the R.I.B.A. had, however, been published some years earlier, in 1903.

The R.I.B.A. Contract represented the achievement of two distinct but closely related objects—that there should be standard conditions of building contract, and that these standard conditions should be mutual, that was to say, fair and reasonable to both parties. Though this proposition sounded simple, it was in the manner of its execution that the extent of the achievement should be measured.

After tracing the vicissitudes of the R.I.B.A. Contract in its earlier days, Mr. Close described how it came about that, after the first world war, when the period of reconstruction was reached in 1919, there was no form of contract generally acceptable to the industry as a whole and there was no established machinery through which the position could be remedied. The speaker continued:

The substance of agreed conditions of contract was forgotten for the shadow of momentary advantages. In December, 1919, the Federation gave notice to the R.I.B.A. to rescind the agreement of 1903 regarding the issue of an agreed form of contract. This was the period of the Building Code issued by the Federation and stated to be "in order to standardise contracts." The method by which it was then sought to secure standardisation by acceptance of the code was hardly likely to succeed. The appreciation of the need for standardisation was, however, a definite step forward, but it had yet to be learnt how and upon what basis standardisation could be achieved. Actually all the time an example of how this could be done was before the industry, and the permanent achievement of these years was not the Building Code, but the Standard Method of Measurement.

The break caused was not easy to remedy. The question of a form of contract reflecting the current practice of the trade had been confused with the problem of what, in the opinion of one section of the industry, the practice of the trade ought to be. The R.I.B.A. felt that the views expressed in the Building Code were so divergent from existing practice that they ought not to serve as a basis for discussion, but that the basis should be the 1909 Form of Contract. In 1922, a Contract Conference was held between representatives of architects, surveyors, builders and others, and the first step in unravelling the tangle was taken by the appointment of a joint drafting committee under independent chairmanship, with arrangements for reference of points of difficulty to Sir William Mackenzie, for final decision. Negotiations proceeded for a period of nearly six years. The principal point of disagreement was whether the architect should be sole judge between the contractor and the building owner upon questions which affected the financial aspect of the contract. It was felt by the architects that if they gave way on this point they would lose control of the direction of the work, and of determining details which could not be settled before the contract was signed. The contractors admitted the right of the architect to control the work and order variations, but he should not be the sole arbiter as to whether such extras caused the contractor expense beyond what he could have reasonably anticipated from the tender documents. Where there was a difference the architect was to give his decision, but that decision should be referable to an independent arbitrator.

A NEW AGREEMENT

Eventually agreement was reached and a draft Form of Contract was approved by the Contract Conference which provided for arbitration on all points. In his memorandum introducing this 1928 Form of Contract, Sir William Mackenzie first refers to it as the "Standard Form of Contract" and goes on to say:—

> It is my considered opinion that it is difficult to measure the advantages that will flow from the general adoption of this Standard Form of Contract. The elimination of uncertainties and ambiguities and the certainty introduced by a standardisation on fair and just lines in clear and simple language must necessarily create confidence throughout the building industry; and I cannot doubt will, by reason of equitable and known conditions, result in closer prices and in reducing building costs.

The representatives of the various sections of the industry had, in their approval of this 1928 Form of Contract, moved in advance of general opinion. Although approved by the Council of the R.I.B.A., the draft was rejected by the affiliated architectural societies. Confidence and goodwill had, however, been re-established between the representatives on either side, and they were not disposed to throw away all that had been learnt and achieved during the long negotiations. Informal overtures were made, and the builders agreed to postpone an active campaign designed to secure the general use of the 1928 Form. The 1928 Form had been too great a break with tradition and it was now for the architects to prepare a new draft which followed more closely the form of the clauses in the 1909 Form, while so far as possible incorporating the principles which had been agreed. From these discussions emerged the 1931 Form of Contract, which was accepted by all parties. The position reached in 1903 and confirmed in 1909 was re-established. The mistake made in 1909 [which made no provision for keeping the Form in line with current developments] was not repeated. Concurrently with the issue of the 1931 Form, the Joint Contracts Tribunal was formed "with the objects of keeping the Form up to date with modern practice and removing any difficulties that may arise in connection with its use."

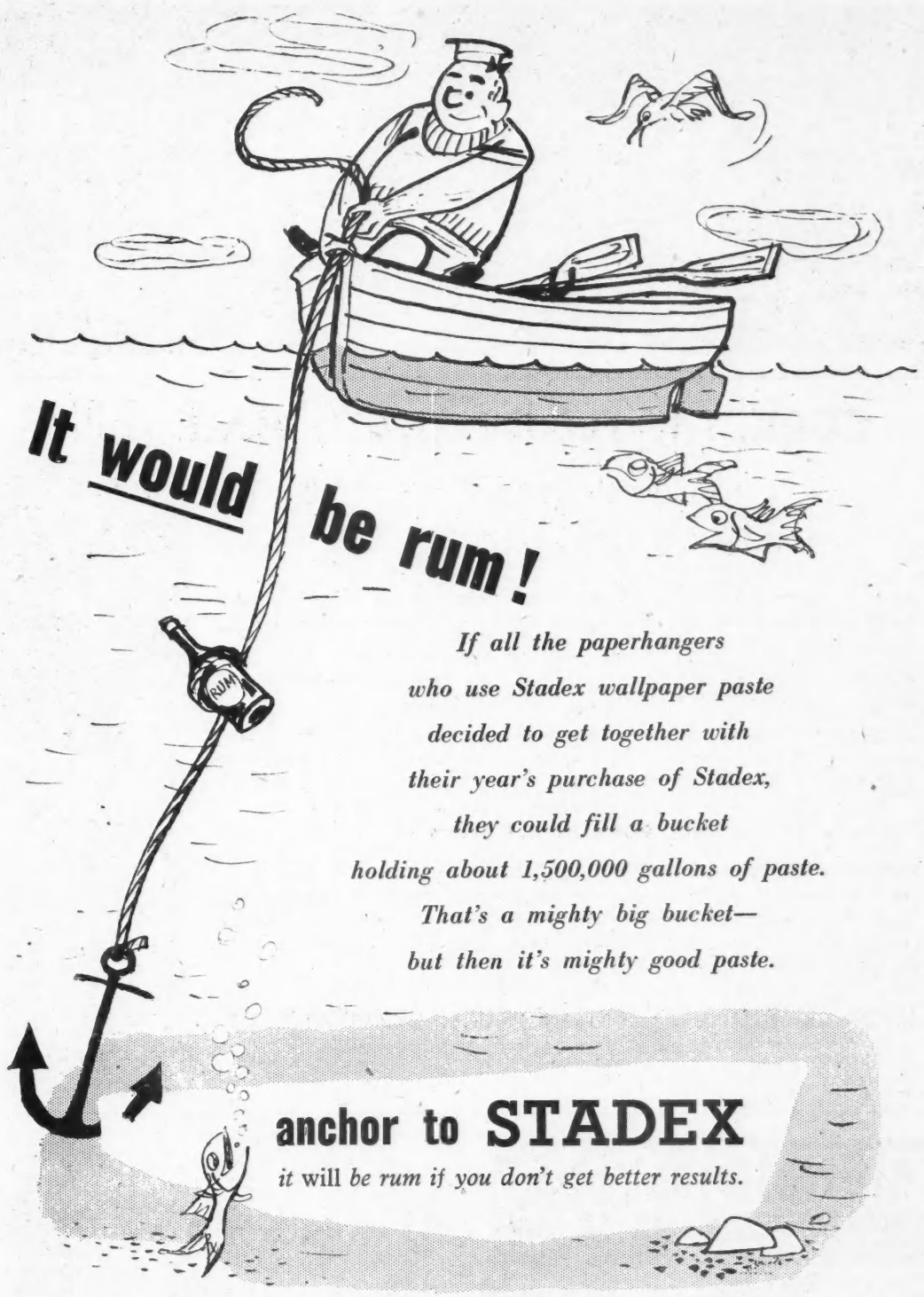
WORK OF THE TRIBUNAL

It is only by experience in its use that it is possible to find out whether a standard form of contract really operates in a manner which is fair and equitable to all parties. The most experienced of committees with the most skilled of legal draftsmen cannot anticipate every difficulty that may arise during the progress of a contract for building works. This point was readily recognised in relation to the 1931 Form. It was admitted that the drafting of it was far from perfect but it was desired to find the effect of the new principles which were embodied in the Form. All representations upon the working of the Form were to be submitted to and considered by the Tribunal. By 1937 sufficient experience had been gained in the working of the Form to be able to proceed with the preparation of a revised edition.

The drafting and agreeing of contract clauses were not the only work of the Tribunal. Active steps had to be taken to make the 1931 Form acceptable by consent as the standard form of building contract. In the form in which it had been prepared—for use in private contracts—the 1931 Form could not be used by local authorities without the addition of certain clauses. In 1937 the first edition of the R.I.B.A. Form specially adapted for use by local authorities was published, containing the Fair Wages Clause and other provisions usually included by local authorities in their contracts. These additional clauses did not affect the agreed principles upon with the R.I.B.A. Form had been prepared. In 1939 a revised edition of the R.I.B.A. Standard Form of Contract was published, but owing to the war it could not be brought into general use until 1945. I think I may say that because of the work of the Joint Contracts Tribunal the mistakes of 1919 have not been repeated.

THE WAR PERIOD

The 1939 Form was kept under review throughout the war period and provisions were drafted to meet the conditions which, so far as it was possible to judge in advance, would exist on the termination of hostilities. It was evident that a fluctuation clause would be required in contracts for a number of years after the war, and the Tribunal gave consideration to the principles upon which such a clause should be framed. It was jointly accepted that, while the contractor should be protected



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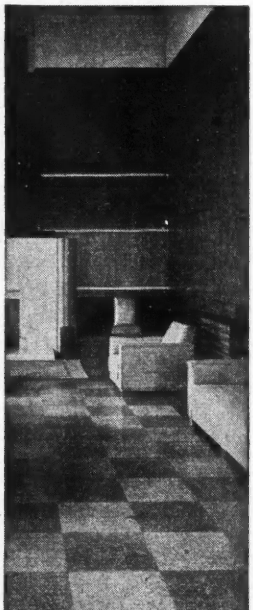

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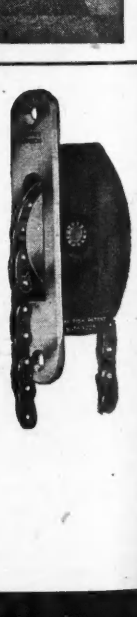

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against increases in price during the progress of the contract, the clause should not be drafted in a way that might deter the building owner from embarking upon building operations. There was thus in existence at the end of the war a form of contract by all sections of the industry, published in two editions—one for private use and the other for the use of local authorities—and up-to-date and applicable to civil building.

The period since the war has been one of extreme difficulty—not least from a contractual point of view. It is a tribute to the soundness and fairness of the principles upon which the R.I.B.A. Contract is based that the use of the form has steadily increased during these difficult years. It is no easy task to draw up standard conditions of contract which will operate within a framework of Governmental controls fairly and reasonably to both parties in all cases. In the state of affairs which has existed since the war, the sound principles upon which the clauses of the R.I.B.A. Contract have been evolved might easily have been forgotten and amendments made to the standard form to meet temporary circumstances or apparently hard cases. This danger has been avoided, and endeavour has been made to meet some of the problems of the post-war period by the issue of Practice Notes by the Joint Contracts Tribunal. I should like to say a word about these practice notes.

First of all, they are not rulings, nor does the Tribunal by their issue, purport to usurp the function of the arbitrator. They are expressions of opinion given jointly by the representatives of the R.I.B.A., R.I.C.S. and N.F.B.T.E. upon problems of interpretation or practice under the R.I.B.A. form which have been brought to their notice. Their aim is to call attention to the true intent and meaning of the contract rather than to interpret any particular provision, and thus to assist in the settlement of difficulties in a manner that is fair and reasonable. I can perhaps make my point clearer by example. Increases in employers' contributions to statutory insurances are not reimbursible to the contractor under the fluctuation clause. There was a reason for this. In the past such increases had been small in amount, and effective only after long notice had been given. They were increases of which in most contracts the contractor would have had notice at the time of tender, and were therefore outside the agreed scope of the fluctuation clause. Unexpectedly in October, 1946, the Government increased contributions for pensions by a substantial amount after less than two months' notice. This was exactly the opposite to what had been contemplated when the clause was drafted. It would have been bad policy at that time for the Tribunal to have amended without very good reason the fluctuation clause before sufficient time had elapsed to gain experience in its working. In any case, an amendment would not have assisted the parties to current contracts and there was no reason to think that Government action in this instance was other than exceptional. A practice note was accordingly issued calling attention to the points involved, and it is believed that the advice given has been of assistance in getting over a difficulty which might otherwise have weakened the confidence of the industry in the standard form.

At this point I feel that the story of the evolution of the R.I.B.A. Contract leaves the realms of history and enters the sphere of politics, and it may be appropriate to see what guidance for the future can be obtained from this story. Earlier in my address, I said that the R.I.B.A. Contract represents the achievement of two distinct but closely related objects; that there should be standard conditions of building contract and that these standard conditions should be fair and reasonable to both parties. I think I was right in using the word achievement, because the current edition of the R.I.B.A. Contract is so widely used—over 70,000 copies were sold last year—that the word standard is properly applied, and I do not think it would have been so generally adopted if it were not fair and reasonable to all concerned and did not reflect the best and current practice of the trade. The R.I.B.A. Form is the standard by consent, and standardisation of conditions of building contract has therefore been achieved on the soundest foundation, but this position can only be maintained at the price of continuous vigilance. If the standard form is not kept up to date with modern developments and practice, then the section of the industry most aggrieved will withdraw its consent as the builders did in the case of the 1909 Form. If the standard form of contract is sought to be made an instrument of policy by one section to enforce its views upon what the practice of other sections of the industry ought to be, as appears to have happened during one period in the past, then the position which has been built up during the past 20 years will be destroyed. I do not think there is great likelihood today of either of these things occurring. The contract question of the future, if I read events aright, will be one in the solution of which architects, surveyors and builders will have a community of interest.

OFFICIAL INTERFERENCE

The growing interference of the Chief Financial Officer in the settlement of public building contracts threatens to overthrow the achievement that the R.I.B.A. Contract represents. The arbitrary powers granted to the Chief Financial Officer under some clauses which I have seen included in local authority contracts exceed those ever claimed by the architect during the period I have reviewed. However arbitrary might have been the power granted to the architect by the contract by the custom of his profession he was bound in his decisions to act judicially. There is so far as I know no such limitation on the powers of the Chief Financial Officer acting for the local authority. It is true that it may be agreed that in practice that these arbitrary powers shall not be exercised unreasonably, but clauses of this kind inserted in municipal contracts are contrary to the principles of the R.I.B.A. Contract and tend to undermine the authority of both architect and surveyor and nullify the agreed provisions for independent arbitration. This matter is really beyond the scope of this address, but I have mentioned it because I believe that the contract problems of the future will be more likely to arise from encroachments from outside than from any internal differences among architects, surveyors and builders. For this reason all sections of the industry have a common interest in strengthening the position which has been built up.

LEGAL CONDITIONS

I have confined myself to what has been achieved by the united efforts of all sections of the industry, but I should like in conclusion to mention one point where the achievement is still far from complete. The recommendations of the former General Builders' Association, when an attempt to solve the contract problem was made in 1866 [outlined by Mr. Close earlier in his address], have been generally accepted and adopted as the R.I.B.A. Contract has evolved, but the wider meaning of the recommendation that " the legal conditions should not be incorporated in the specification of work or with the tender " has not yet been fully appreciated. The conditions in the R.I.B.A. Contract are standard general conditions, and I think it might be an improvement if they were so described on the form. They deal with matters common to all building contracts, and provide the legal basis upon which building works may be carried out. The advantages of standardising the legal basis of contracting are generally recognised, but it is not so generally appreciated that the whole benefit of standardisation is lost and the standard form merely becomes a model form, if attempt is made to insert special conditions of contract by altering or adding to the text of the printed conditions.

The same position arises if special conditions at variance with the general conditions are inserted in the bills of quantities. This latter point is, of course, dealt with in Clause 10 of the 1939 Form, but I am not concerned here to discuss the effectiveness in law of that provision. I wish only to deal with the practical side. The agreement is contained in the contract documents read together. If the builder is invited to tender upon the basis of an R.I.B.A. Form plastered with slips and covered with red ink amendments, and of bills of quantities containing items which purport to vary the printed conditions, I am at a loss to know how he can rightly estimate the effect and value of those alterations in the time given him to tender. After all, the builder's job is to give a price for erecting a building, and not to waste his time estimating what the cost of a particular alteration made to the text of the standard conditions may amount to in the events which may occur during the progress of the works. There must, of course, in most contracts be special conditions of some kind, but these in my opinion should not be incorporated in the contract documents by altering or adding to the text of the R.I.B.A. Form, nor should they relate to matters already dealt with in the standard conditions. They should be set out separately in the Preliminaries of the Bills

for the contractor to price if he so desires. I appreciate that many of the alterations made in individual contracts to the text of the R.I.B.A. Form are largely formal in effect, but this does not affect the point I wish to make, namely, that the documents presented to tenderers shall be set out in a form so clear that it will not be necessary to consult a solicitor to find out really what are the conditions under which the work is to be carried out.

I do not think there is much difference of opinion upon this point within the industry itself. It is a question largely of practice and method of presentation of documents, but failure to appreciate its importance may tend to undermine the position which has been achieved. If some members of the bodies represented on the Joint Contracts Tribunal appear to regard the R.I.B.A. Form only as a model to be adjusted to suit individual requirements, then it becomes more difficult for that Tribunal to say to local authorities, or to others who may seek to insert clauses upsetting the agreed balance between the parties to their own advantage, that general conditions of contract for building works have been mutually agreed and are standard, and fair tenders cannot be obtained where unusual provisions are inserted.

In their summary of conclusions and recommendations the Working Party on Building state that " more general adherence to a standard form of building contract is required." Few will disagree with this statement, but the Working Party do not go on to say how, in their opinion, general adherence is to be secured, or upon what principles a standard form of contract should be based. The industry has, however, already given the answer to this question by the production of the R.I.B.A. Form of Contract. A standard form of contract to be acceptable must be freely negotiated and fair and reasonable to both parties ; general adherence is then to be secured by consent. To have achieved standardisation of conditions of building contract upon these principles, even if the achievement is not fully complete, is something of which architects, surveyors and builders may be proud.

COUNTY AND CITY AND BOROUGH ARCHITECTS

Joint Annual Dinner

THE fourth joint annual dinner of the County Architects' Society and the City and Borough Architects' Society was held recently at the Tallow Chandlers' Hall, Dowgate Hill, with Mr. L. C. Howitt, president of the City and Borough Architects' Society, presiding, supported by Mr. J. Harrison, president of the County Architects' Society.

Seventy-six members and guests were present, the guests including Lord Kennet, chairman of the A.M.C.; Sir John Maud, permanent secretary, Ministry of Education; Mr. A. Graham Henderson, A.R.S.A., president of the R.I.B.A.; Mr. C. D. Spragg, secretary of the R.I.B.A.; Alderman A. Moss, J.P., of Manchester; Mr. D. M. Nenk and Mr. S. A. W. Johnson Marshall, A.R.I.B.A., of the Ministry of Education; Mr. W. A. Rutter, F.R.I.B.A., chief architect, Ministry of Works; Mr. A. G. Chant, F.R.I.B.A., past president and past hon. secretary of the County Architects' Society.

ASPECTS OF BUILDING EDUCATION

Conference at the L.M.B.A.

A CONFERENCE on Building Education was held at 47, Bedford-square, W.C.1, on October 19, MR. DUDLEY F. COX, president of the L.M.B.A., in the chair. In his opening remarks, the chairman referred to the first Education Conference in 1950, which had been extremely successful, and the present meeting had, therefore, been arranged with every confidence. He was glad that co-operation between the technical schools and the building industry was steadily increasing. The employers had an overall interest in the work of the schools as they wished their employees to be fully trained and kept up to date in technical education.

MR. HUGHES (director, L.M.B.A.) then gave a brief report on the action taken directly or indirectly as a result of discussions at the 1950 Conference.

Circulars had been issued to members of the L.M.B.A. recommending that all apprentices should be allowed to attend part-time day release classes up to the end of the year in which they reached the age of 18, and also that boys showing exceptional promise should be allowed to attend classes after reaching that age.

A register had been compiled of employers prepared to take boys during school vacations. A register was also in preparation of employers who were willing to take third year National Diploma students.

Action taken on foremanship training was not directly, or possibly even indirectly, as a result of the Education Conference in 1950, but as a result of a request made by the Regional Advisory Council. Three types of courses were now available in the London region: these were (a) full N.F.B.T.E. course, (b) preparatory course, and (c) course in supervision for those mainly engaged on maintenance and jobbing work. Courses were being run at Brixton, Croydon, East Ham, Erith, Hammersmith, Tottenham, Wandsworth, Watford, Willesden and Woolwich. The arrangements for enrolment had been dealt with to a large extent by the London Regional Foremanship Training Liaison Committee, upon which the L.M.B.A., the A.P.T.I., the Regional Advisory Council and the three London foremen's associations were represented.

A register of part-time lecturers had been started but at present this only covered lecturers in foremanship. Assistance had been given to several colleges in obtaining lecturers for the current session.

A new edition of the L.M.B.A. Memorandum on Building Courses in the London Region had been published, and it was hoped it had been instrumental in securing a greater enrolment for at least some of the Courses.

Mr. Hughes recalled that it had been said at the previous Conference that there was not sufficient incentive for boys in the way of prizes, and said that it might, therefore, be worth while mentioning that considerable progress had since been made with the establishment of the L.M.B.A. Educational Awards Fund. The question of an apprenticeship scheme for office staff had been discussed at the 1950 conference, and since then a reminder had been sent to members of the L.M.B.A. regarding the special form of indenture which could be obtained from the L.M.B.A.

Mr. Hughes also mentioned that the L.M.B.A. education sub-committee was considering ways and means of introducing a scheme for studentship for the London Region.

A. CRAFT TRAINING

(1) The steps necessary to arrest the decline of Craft Apprenticeship.

MR. STALLEY (Croydon Polytechnic) said that when comparing some figures of evening-class attendances with those of last year, he had discovered a drop of 20 per cent. in the first-year building courses; 10 per cent. in the joinery courses, and 60 per cent. in masonry courses. With regard to part-time day attendances, a drop of 20 per cent. had been shown in the first-year building courses, 55 per cent. in brickwork and 33 per cent. in plumbing; carpentry and joinery class attendances had remained approximately the same. Mr. Stalley said that if these figures could be taken as representative in the London Region, something was wrong in the industry generally.

The chairman said it was generally recognised that there was a decided shortage of boys coming into the industry.

MR. WOODBINE PARISH (L.M.B.A.) explained that a meeting between youth employment officers and representatives of the L.M.B.A. had been held in recent weeks when the question of placing of boys had been the main point for discussion. Every employer was being stimulated with regard to taking apprentices, and particularly in giving notice of vacancies.

(2) The question of ensuring part-time day release for all Apprentices and Improvers up to the age of 18 years.

MR. COCKS (S.E. Essex Technical College) suggested that the association should take steps to ensure that all employers should allow their apprentices to attend part-time day release classes.

THE CHAIRMAN said that the point raised by Mr. Cocks was one of the main problems of the industry. He pointed out, however, that many employers, particularly the small builders, had understandable difficulties.

MR. HOWDILL (East Ham Technical College) said that according to published figures there should have been 11,000 apprentices up to the age of 21 in May, 1950. However, they were not attending classes.

MR. WOODBINE PARISH said that this problem was an extremely difficult one and that the association was doing its best to get both boys and employers to appreciate the great benefits to be obtained from attendance at classes.

MR. FALKUS (L.M.B.A.) suggested, with regard to the figures quoted by Mr. Howdill, that these were Employment Exchange figures and not registration figures.

MR. STALLEY (Croydon Polytechnic) enquired whether the L.M.B.A. was taking steps to ensure that apprentices complied with their obligations, and the chairman explained that a printed document was issued to the employer, the parent and apprentice, setting out their respective responsibilities.

MR. HUGHES suggested that for a long time the relationship and responsibilities of the parent had been neglected, and said that

in the future the parent should be kept in the picture.

MR. WALDRAM (L.M.B.A.) thought that there would be provision in the Education Act for day release and suggested that this might help to force the issue.

(3) The question of extending part-time day release to the age of 21 years.

MR. COCKS recalled that this matter had been raised at last year's conference, and suggested that the boys who found difficulty in reaching the required standard might well be those who would benefit most from continued attendance up to the age of 21 years.

MR. WOODBINE PARISH suggested, however, that if a boy who showed exceptional promise were allowed to continue his training beyond the age of 18, he would automatically have the opportunity to attend day release classes up to the age of 21. Any further extension would impose on everybody, and would involve additional cost and expense.

THE CHAIRMAN said that it must rest with the individual employer to release apprentices to attend classes and agreed with Mr. Woodbine Parish that there was no possibility of extending the age limit to 21 years.

(4) The means of increasing part-time day release, especially from small firms.

MR. HEATH (S.E. London Technical College) felt that there should be some system by which a check could be made in order to ensure that the apprentice was, in fact, getting his part-time day release.

THE CHAIRMAN pointed out that one of the objects of the conference was to obtain the highest degree of co-ordination between the schools and industry, and said that whilst it was appreciated that it was important to educate boys, it was also important to "educate" employers.

(5) The number of evening attendances required from boys attending part-time day release classes.

MR. HOWDILL explained that this was, in fact, a query he had received from an employer, whose apprentices were attending part-time day release classes but no evening classes. Although complete conformity was not wanted, it appeared that there was a great deal of divergence in the way of running classes, and he thought it was time for this matter to be investigated.

It was also mentioned that there was considerable divergence in the syllabuses of different schools and that students found it difficult to adjust themselves if they had to move from one part of the country to another.

MR. HAY (Ministry of Education), however, thought that there should be no such difficulty at all, if all the Schools and Colleges throughout the country worked to a standard syllabus as was already the case with City and Guilds courses.

THE CHAIRMAN agreed that this whole matter was one of great importance and suggested that it be considered in detail as soon as possible.

(6) Age limits for entry to Technical Colleges.

MR. WOODBINE PARISH said that the age for entry to Technical Colleges differed considerably, and the position appeared to be chaotic.

MR. PRICE (Regional Advisory Council) said conditions varied greatly but that in many cases boys of 15 or 16 could enrol only in preliminary courses and did not begin to receive craft instruction until they reached the age of 17. He thought that some indication of the general opinion should be obtained as to whether it was felt that there should be some provision for apprentices and young workers to get some craft instruction from the beginning of their apprenticeship. He pointed out that it was often found that the standard of education required of apprentices entering technical schools was such that they required preliminary training.

MR. SCOTT (Northern Polytechnic) pointed out that this problem arose because of the apprenticeship scheme, which required an apprentice to be indentured at 15, but there were very few schools in London which could admit a boy of 15. It seemed that the whole training scheme for apprentices could never be brought to an entirely satisfactory state. He suggested that information might be included in the association's handbook of the schools who admitted boys from the age of 15.

MR. WOODBINE PARISH suggested an extension of the discussion on this particular subject, at a later date, and invited those who were interested to submit their names.

(7) Standardisation of School Reports.

MR. HILL (L.M.B.A.) explained that this particular matter was causing the London Regional Joint Apprenticeship Committee a great deal of concern. He said that out of 12 school reports he had recently received not two were alike, and on behalf of the Committee he asked that there should be some standardisation of school reports.

MR. FLOOD (Ealing Technical College) suggested that the L.M.B.A. might be invited to draw up a standard form for school reports.

MR. FULLERTON (L.M.B.A.) asked the schools if they could not send individual reports instead of reports of three or four apprentices on one sheet. Next there was the question of reports in duplicate, which some schools did send and some not, and in these cases it was important to know whether those schools which did not supply duplicate reports to employers were sending copies to the apprentices' parents. He also mentioned that some schools submitted yearly and some half-yearly reports, and it was difficult to make comparisons.

MR. FALKUS said that it would also be desirable to have reports on work done in evening classes.

It was suggested on behalf of the colleges that it might be helpful if firms would acknowledge receipt of reports.

THE CHAIRMAN again emphasised the great need for co-ordination, and suggested that this matter should be deferred for discussion at a later date.

(8) The full-time attendance of Apprentices at Colleges during periods when employers have no suitable work for them.

MR. GODDARD (West Ham County School of Building) explained that he was raising this matter as a result of a request by an employer who had found himself in difficulties because no suitable employment for his apprentices was available. A suggestion had been made that apprentices who found themselves in a similar position might be admitted to technical schools for full-time attendance until such time as suitable employment could be found for them.

MR. WOODBINE PARISH thought that this arrangement would prove to be impracticable and that the solution was entirely in the hands of the employer.

MR. HEATH (S.E. London Technical College) said that arrangements had been made between his college and local employers for apprentices to get full-time instruction, and to use the school's workshops. In cases where a certain craft was getting slack and the employer could not find employment for his apprentices in that branch, he thought it would be possible for arrangements to be made between technical colleges and employers locally.

(9) Other topics.

MR. HILL said that as Chairman of the Regional Apprenticeship Committee he was frequently confronted by members of the L.M.B.A., who said that the standard aimed at in the colleges was too high, and this problem most concerned plastering and plumbing apprentices. When third- or fourth-year plastering apprentices attended geometry classes they often found that they were in the same class as architectural students who were at a more advanced stage, and he asked that these plastering and also plumbing apprentices should receive more individual attention.

MR. HAY said that some difficulty might be experienced in these cases in the provinces, but this should not be so in London.

B. ADVANCED TRAINING

(1) The possibility of improving the presentation of the subject of Building Construction.

MR. WALKDEN (The Polytechnic) mentioned various ways in which the subject of building construction was presented, i.e., by drawings on the blackboard, or by means of film strips, and inquired whether there was an ideal way of presenting this subject.

MR. SCOTT (Northern Polytechnic) said that stimulating interest in the subject was most important and that a very great deal must depend on the teacher.

MR. FOSTER (The Polytechnic) thought that film strips should be more widely used and thought that the industry might give support, possibly financial support, in choosing the right type of films.

(2) The question of examinations in Building Construction. Do they not lay too much stress on traditional methods?

MR. WALKDEN submitted that teaching was still based on the old text-books and that, with changes in technique and design, consideration should be given to a thorough revision.

Whilst the point was admitted, it was stressed that approximately 50 per cent. of the Nation's building programme consisted of repairs, maintenance and alterations, whilst a lot of work was extension to existing buildings, so it was necessary for craftsmen to have a thorough knowledge of traditional methods. No doubt revision of the standard books would steadily be made as the situation developed.

(3) Part-time day release for Boys in Builders' Offices.

MR. WOODBINE PARISH explained that a course was needed to cater for the increasing number of junior office employees, possibly a semi-technical or semi-commercial course, which could be easily followed by the average office boy, who left school at the age of 15.

MR. WALDRAM suggested that too much stress should not be laid on the commercial side, as a good knowledge of building was most important.

MR. SCOTT welcomed the suggestion made by Mr. Woodbine Parish and said that there should not be any difficulty for colleges

in London to establish such courses. He said that it was time for the industry to come into the open and say how technical education could serve the industry. The colleges were only too anxious to establish part-time courses for young men serving in the industry.

THE CHAIRMAN said that he welcomed this discussion as he felt that training facilities for this branch of the builder's staff had been sadly neglected.

MR. SCOTT suggested that distinction should be made between the technical and non-technical boys who were taken into the industry on the administrative side. There were boys with grammar school education who could go through up to a professional degree, but there were also the boys with secondary and modern school education who had been taken in for general clerical duties. There was in addition the question of storekeepers and checkers who required some degree of technical education.

(4) The question of obtaining wider recognition by the Industry for Ordinary and Higher National Certificate.

MR. BROWN (Kingston Technical College) urged wider recognition of ordinary and higher national certificates and quoted a case where a student with a higher national certificate found difficulty in obtaining employment, after completing his military service, at adequate rates of salary.

MR. WOODBINE PARISH pointed out, however, that the industry has already accepted its responsibilities in this respect; the National Federation had produced a survey on technical education which included every aspect of the training. He also stressed the difference between the certificate and diploma courses.

(5) Other topics.

MR. GODDARD mentioned that he had been requested to run a specialist course for apprentice plumbers but that enrolment had been very poor. He felt that there was a need for the course and wished to make it known that the course existed.

C. POST ADVANCED TRAINING

(1) Foremanship Training.

MR. WOODBINE PARISH said that it was felt that at least two separate courses were needed for foremen; one should provide opportunities for those men who were already in established positions as foremen, charge hands, etc., who needed some general training in building construction, administration and organisation: the second should be a long term course for students with theoretical qualifications but no experience in charge of work.

MR. WOODBINE PARISH also mentioned that a report would shortly be issued by the Training of General Foremen Committee. He asked the technical colleges to take note of the work of that committee and keep in touch with it if they ran courses for foremen.

MR. GREGORY (London Regional Council of Builders' Foremen and Clerks of Works) expressed appreciation of the introduction of a preparatory course as it had been found to be most helpful. He said, however, that the technical schools were not using the foremen as much as he would like. He went on to explain that in London as well as the provinces, colleges were insisting that lecturers should have some degree of qualification but it was strongly felt by the foremen that practical experience was more essential than academic qualifications.

MR. FULLERTON (L.M.B.A.) said that foremen were often called upon to move about to different parts of the country and suggested that this led to difficulties in their attending training courses especially as these courses in many cases varied at different colleges.

MR. FARROW (L.M.B.A.) thought that a full-time intensive course would be the best solution. Builders would find it more convenient to spare their foremen for a few weeks for the purpose of attending a full-time course rather than for a long-term course of one or two evenings a week.

MR. WOODBINE PARISH said it was up to the employers to find individual men with the necessary ability and have them trained at technical colleges. The building industry was well ahead of other industries in foremanship training, but it was important not to advance too quickly.

MR. HAY said that it was hoped shortly to start a course in Rugby for lecturers in foremanship.

MR. STALLEY (Croydon Polytechnic) referred to the necessity for providing the right type of material for these courses, and said it was deplorable that schools were not getting more qualified men for the foremanship courses.

MR. WOODBINE PARISH said that every possible step would be taken to encourage men to enrol for foremanship courses. His own firm had initiated a graduate foremen scheme to encourage young men.

(2) The placing of National Diploma Students in employment.

MR. HUGHES explained that a register had been compiled of employers prepared to take third year ordinary diploma students and invited the schools to submit the names of such students.

MR. HOWDILL mentioned the question of wages and said that he had met instances where the commencing salary for holders of the higher national diploma was very low. it was, however, pointed out that holders of these diplomas could usually command a reasonably high salary.

(3) Sandwich Courses.

MR. WOODBINE PARISH pointed out that a " sandwich course " for the higher national diploma was now being run at Brixton School of Building. The attitude of the L.M.B.A. to the course was generally favourable but it was thought that its introduction at the moment was, perhaps, premature. The scheme involved a certain legal responsibility to see that the students were fully employed during the periods they had to spend in the industry. He suggested that this might be solved by having the students indentured or apprenticed until such time as they had to recommence their training at the college. The Education sub-Committee of the L.M.B.A. was pursuing this matter, and it was hoped to produce some form of a deed or agreement for this purpose.

MR. WALDRAM said that such a deed was already in existence but was used mainly for civil engineering apprentices.

D. GENERAL

(1) British and Continental standards of Building Education and Craftsmanship.

MR. BRILL (Kingston School of Art) said that progress was being made in improving the training of apprentices and education generally, but he thought that a look might be taken at continental methods to see if they had anything to offer. He suggested that, perhaps, a travelling scholarship might be introduced.

MR. WOODBINE PARISH pointed out that the question of bursaries was under discussion by the L.M.B.A. Education sub-Committee. He also mentioned the existence of the International Labour Organisation, which consisted of employers and employees, and upon which the Government was represented, and a very wide interchange on matters of education took place in this organisation.

MR. WHEATLEY (City and Guilds of London Institute) mentioned conditions in Switzerland where apprentices received a much lower wage during their training than in this country but where there seemed to be less difficulty in obtaining recruits. He thought, also, that the status of the skilled craftsman in Switzerland was very much higher than in this country and that this factor might have an influence on recruitment.

(2) The possibility of notifying schools of Apprenticeship requirements in April of each year, so that they may make arrangements for placing boys.

MR. ELMES (Brixton School of Building) said it would be helpful if firms would notify the schools of their apprenticeship requirements in April instead of July of each year.

MR. WOODBINE PARISH agreed with this view and said that it would be possible to compile a list of vacancies by April.

This was emphasised by THE CHAIRMAN, who said that the employers were anxious to help the schools in every possible way.

(3) The possibility of representatives of the L.M.B.A. visiting Colleges at least once a year to foster contacts between Colleges and Industry.

MR. ELMES suggested that employers should visit colleges periodically and see their apprentices at work. The colleges, he was sure, would welcome employers at all times.

MR. WOODBINE PARISH thought that visits to colleges could be arranged by the L.M.B.A. areas.

A suggestion was also made that parents should be invited to visit colleges.

THE CHAIRMAN said that the whole matter was one for the L.M.B.A. Apprenticeship Committee to consider and that he would arrange for it to be placed on their agenda as soon as possible.

(4) The return of teachers to Industry during College vacations.

This matter was brought forward by MR. GODDARD, who said that he had accepted the challenge made at the previous conference and had spent part of the summer vacation with a building firm. He felt that the time had been extremely well spent.

THE CHAIRMAN agreed that such an arrangement could be extremely valuable and stressed that the L.M.B.A. would give every assistance to teachers seeking to return to industry during vacations.

(5) Advisory Committees at Colleges.

MR. HILL explained that many colleges had these advisory committees consisting of members of the industry and representatives of educational bodies, and if there were any colleges which required employers to serve on their advisory committees the L.M.B.A. would be pleased to give any assistance possible.

THE CHAIRMAN pointed out that here again was an obvious need for closer liaison between technical schools and the industry, and said that the discussion had clearly

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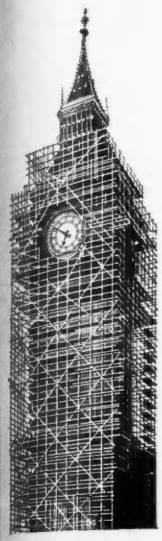

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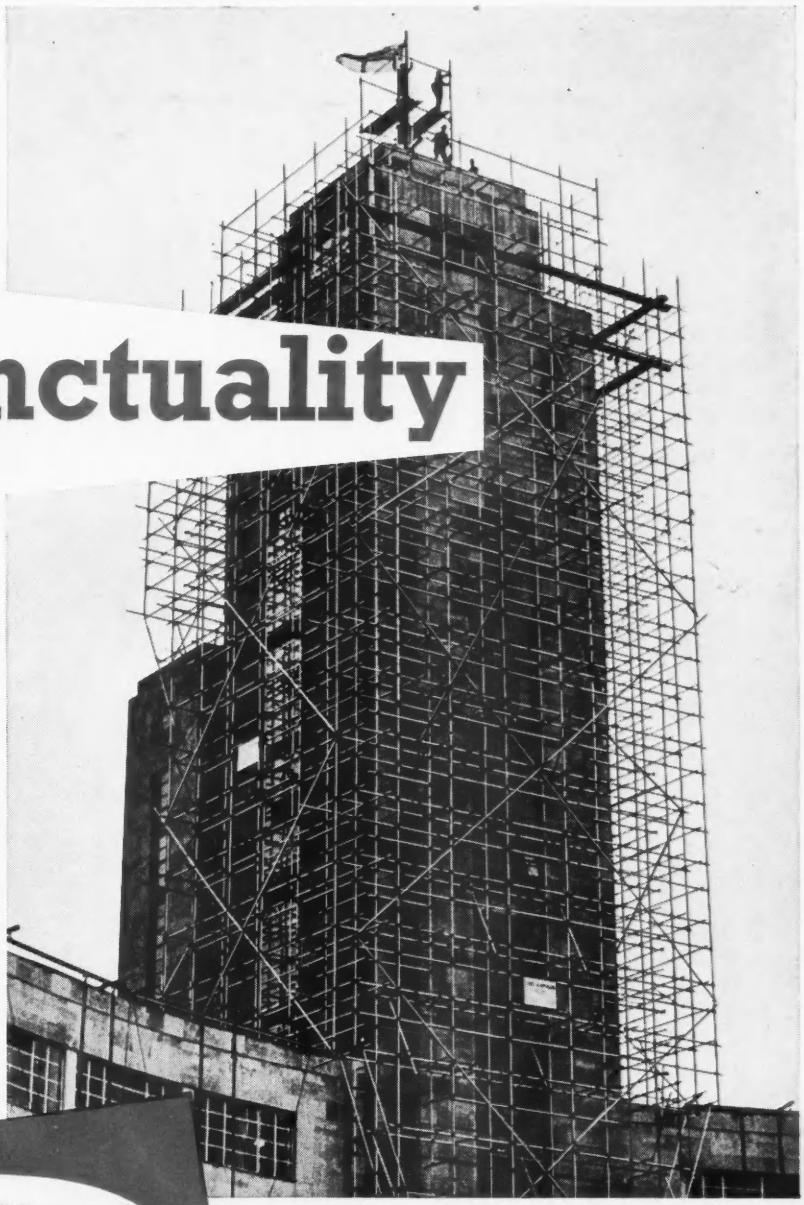

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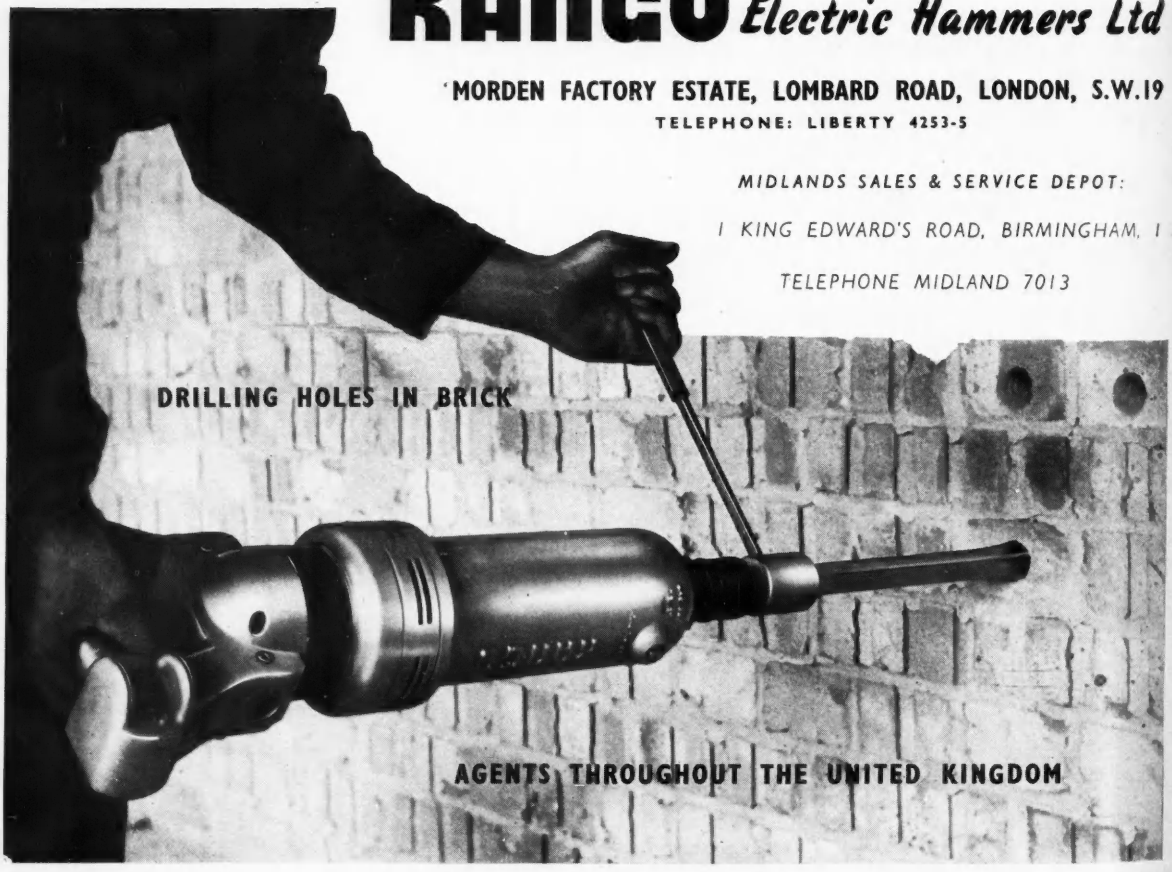

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indicated the need for some permanent liaison body which could meet frequently to discuss these and similar problems.

(6) Visits to Building Sites.

MR. HILL said that if there were any colleges wishing to arrange visits to building sites for a group of their students as part of their training, they should approach the L.M.B.A. He pointed out that during the last 18 months the L.M.B.A. had organised several such visits.

MR. HEATH said that this matter had been raised at last year's conference, and the schools had asked employers to let them know of suitable sites which could be visited.

THE CHAIRMAN and MR. HUGHES, however, pointed out that it would be preferable for the schools to approach the L.M.B.A. if they wished to visit a building site and mention specific jobs they wished to visit; the L.M.B.A. would then approach the employer in order to make the necessary arrangements.

(7) Vacation Employment.

The Conference noted that this had already been covered by Mr. Hughes at the beginning of the Conference.

(8) The possibility of instituting Courses on the maintenance of Builders' Plant.

MR. HOLLOWAY (L.M.B.A.) said that the industry was becoming increasingly mechanised and at the present the maintenance fitter was not catered for in the building colleges and asked if it would be possible for building colleges to institute courses suitable for the maintenance fitter.

MR. HAY said that this could only be done in the engineering department, and that a great deal of mechanical equipment was required.

MR. WOODBINE PARISH said that the course required was not purely technical but on maintenance generally, something on the lines of a specialist course with an introduction to the mechanical side.

MR. HEATH said that in his college apprentice fitters attended an ordinary mechanical engineering course.

THE CHAIRMAN pointed out that there was a danger the issue might get involved. It would appear that the type of training required was obtainable at an engineering school. The maintenance fitters would do their training and then become a section of the industry.

MR. PRICE suggested that Mr. Holloway should explain in detail the type of course needed and then it could be discussed at a later date with a view to finding out whether an engineering course would be suitable, and if not discuss the possibility of establishing a course for that purpose.

(9) Steps to be taken to ensure the use of the results of Building Research by the Industry.

MR. STALLEY quoted several severe attacks by the technical Press with regard to application of science to the building industry.

THE CHAIRMAN said that the London Region had gone a long way on this point, and mentioned the new technical information service which had been set up and said that very wide use of it had been made by the employers.

(10) Other topics.

MR. HEATH enquired whether the education memorandum would be available for employees as well as employers.

MR. WOODBINE PARISH explained that it would be given the widest possible circulation.

MR. AVERY (Ealing Technical College) enquired whether a sub-committee would be appointed to take action on the matters discussed at the conference.

THE CHAIRMAN explained, however, that a lengthy report would be produced of the proceedings at the conference and it would be forwarded to all those attending the conference and would be considered by the L.M.B.A. Education and Apprenticeship Committees. It would then be decided how to set up a liaison body to deal with matters raised at the conference.

MR. HAY expressed appreciation for the action taken by the L.M.B.A. in arranging the conference and said that it could do nothing but good. MR. REID (Brixton School of Building) also thanked the L.M.B.A. and expressed the hope that another conference would be held in a year's time.

THE CHAIRMAN said that the time had been very well spent and that the 1951 Conference had advanced a great deal further than the previous one. He hoped that the next one would be even more successful. He thanked those present for their attendance and for the assistance given in making it such a success.

WAR DAMAGE

Payments in 1951 Total £72m.

THE War Damage Commission paid out £72m. during 1951, compared with £92m. in 1950 and £105m. in 1949. The average weekly rate of payments in the last quarter of 1951 was £1,240,000.

The commission paid 181,000 "cost of works" claims for repairs during the year, and made 40,000 payments on account. The amount involved was £62m., of which £60m. was paid to private owners and the remainder to local and other public authorities. About three-fifths of this sum was for the repair and rebuilding of houses.

Other principal items were: commercial buildings, £6½m.; factories, £7m.; shops, £2½m.; churches, £2¼m.

The value of payments for total loss properties amounted to £10m., of which £3½m. related to houses.

Greater London's share of the total was £50m.

Total war damage payments by the commission now amount to nearly £1,020m. in 4,373,000 separate payments. Contributions by property owners during and after the war amounted to £198m.

L.M.B.A.

Building and the Economic Crisis

THE building industry could make a real contribution towards solving the present critical economic problems facing the country if it recognised its responsibilities, said MR. D. E. WOODBINE PARISH, president-elect of the London Master Builders' Association, in a speech at a luncheon before the tenth annual general meeting of Central Area No. 1 in Kensington on January 9. Mr. W. H. Lugg, chairman of the Area, presided.

The time had come, said Mr. Woodbine Parish, for everyone in the industry to appreciate the gravity of the present situation and to resolve individually to combat the ever-rising cost of living by greater personal effort. The days for wishful thinking were past, and energetic action was now urgently needed to put our national house in order. "Surely there can be no section of the building industry or, for that matter, of any other industry that can, with confidence, maintain that no room exists for improved performance. I suggest that in all sections of this vast, complex and indivisible industry there is ample scope and opportunity for increased efficiency by the elimination of all forms of waste—waste of human energy, waste of good will, waste of materials, waste of time and opportunity. As a nation we seem recently to have lost the virtue of thrift and, in consequence, our margin of waste has increased to such a point that our standard of living is now imperilled.

"The building industry has many competent and talented architects and consultants, many individuals well trained and experienced to direct, organise and control the work it undertakes as well as untold numbers of fine and reliable craftsmen and attendants. And yet there appears to be a spirit of defeatism and frustration throughout the whole industry."

He believed that we could dispel these feelings by our own ability and exertions if we re-established that quality of enlightened and energetic leadership at all levels that promoted in each one of us a warm feeling of good will and a desire to help.

"As an industry we are more concerned, perhaps, than any other single industry with national capital expenditure. We enjoy a sheltered position so far as foreign competition is concerned, but we are, in large measure, responsible for the volume of work produced for any given amount of capital invested and for the burden of cost involved in maintaining in good condition the fabric of the nation's buildings."

"If by improved methods, by more thorough planning, by better organisation, by greater co-operation and by the systematic eradication of waste we can succeed in reducing the marginal cost of our service to the community, then as an industry we may claim to be making a valuable and substantial contribution to our present national problem."

"New Coventry," Australia

The move to establish a township called "New Coventry," near Sydney, was taken a step further at a meeting in Sydney on January 7. The town is to be named after the city of Coventry in England. The plan provides for a settlement of British ex-Servicemen and for a British memorial hospital, a memorial sports area and a community centre.

ECONOMY IN HOUSE BUILDING

Suggestions in New Scottish Handbook

A NEW handbook, entitled "Economy in House Building" (Part VI, Scottish Housing Handbook, Stationery Office, 6d.), which has just been issued to local authorities by the Department of Health for Scotland, describes methods whereby building costs can be kept down without falling below post-war standards, and without resorting to shoddy workmanship or materials. The handbook insists that local authorities should not try to save by measures which will make their houses less convenient to live in, less durable, or less resistant to cold, damp or noise.

Among the suggestions made is that a year's programme should not be divided among more sites than is absolutely necessary. Building 12 houses on one site and 12 on another is normally dearer than building 24 on the same site; the cost not only of the work but also of professional fees and administrative time will be higher. If the programme is a small one, two years' programmes can be put out to tender at once. Contractors with organisations of suitable size are likely to offer lower tenders for schemes of 24 houses than for two separate tenders of 12 houses, even if the 24 houses are not all to be started in the same year.

The timing and organisation of site preparation and building should be completely planned before the work begins; otherwise there will be delay, increase in costs, lowered morale and a fall in productivity. Architects should collaborate with contractors in order to "pre-plan" the work in every detail and should give them full sets of drawings and specifications before the work starts. After the work has started, regular progress meetings on the site between architects and contractors will help to avoid delays.

The general lines of the layout, the handbook continues, should be carefully related to the contours; this will not only save costs but will also improve the appearance of the scheme. Road levels should be chosen with care; it is usually cheaper to excavate roads than to underbuild houses.

House Types

Since terraced houses and flats of three or four storeys are cheaper both in frontage and in materials than semi-detached cottages, they should be used in high proportions wherever possible. Where ground floor houses are needed for elderly people or the disabled, they can sometimes form part of blocks with two or more storeys, the upper storeys consisting of flats or maisonettes. In designing flats it is usually economical to repeat a design vertically on each floor. Irregular plan forms increase the cost of exterior walls and roofs. Maisonettes can be combined with flats and have some advantages: they are better insulated against noise, they make less use of common stairs, and access balconies are needed only on alternate storeys. Single-storey houses are the dearest of the normal types, and should be reserved for those rural sites where two-storey houses would not be in character with the surroundings.

Local authorities should make sure that they are not building too many houses of the larger sizes (of four apartments or more), having regard to the sizes of the families to be provided for.

The greatest opportunities for economy are to be found in the design of the houses themselves. It is possible to plan a house that uses considerably less materials and labour than the typical post-war local authority house, and yet is no less convenient to live in. Rooms of the sizes given in the Appendix to Part 3 of the Handbook can be fitted into a house with considerably less than the maximum overall areas laid down in that Appendix.

In the sketch plans which illustrated the Department's proposals for economical design in D.H.S. Circular No. 94/1951, the floor areas were as follows:*

	Four-apartment house	Three-apartment house
Living room ...	220 sq. ft.	184 sq. ft.
First bedroom ...	136 sq. ft.	136 sq. ft.
Second bedroom...	116 sq. ft.	111 sq. ft.
Third bedroom ...	70 sq. ft.	None
Kitchen	85 sq. ft.	72 sq. ft.
Bathroom	33 sq. ft.	36 sq. ft.
Utility room ...	69 sq. ft.	An inner lobby is substituted
Overall area ...	860 sq. ft.	680 sq. ft.

Aims of Design

FEATURES AT WHICH THE DESIGN SHOULD AIM ARE:—

Narrow frontages. These reduce expenditure on roads and other services.

Simple roofs. A high pitch or a complicated design increases costs. A hipped roof normally uses more timber than a roof designed with a gable. The pitch should be as low as the type of covering will permit. Flat roofs can be cheap, but unless the covering is carefully chosen and laid they are costly to maintain. Chimneys should be grouped into the minimum number of stacks.

Dormer and bay windows should be sparingly used.

Low ceilings. There is no objection on grounds of comfort or health to a ceiling height of 7 ft. 6 in., which not only economises in labour and materials, but also makes it easier for the designer to achieve a well-proportioned elevation. Rooms with low ceilings are easier to heat.

The minimum of under-building. Ground floors need not necessarily be above road level. Terrace blocks can be stepped so that they are readily adapted to changing ground levels.

Suspended concrete floors should be reserved for houses where the amount of underbuilding makes solid floors dearer. To support suspended floors, concrete beams may be cheaper in some circumstances than sleeper walls.

Compact staircases. A private stairway need not be more than 2 ft. 11 in. wide. A satisfactory one, without winders, can be designed within 40 sq. ft.

Where there is a common stairway in flats care should be taken to make the most economical use of the additional space on upper floors above the entrance hall. It is usually better to use this space to provide an extra room for one of the flats rather than to divide it between two flats.

Economical circulation space. Lobbies, porches, halls, landings and passages should be no larger than is necessary to provide independent access to all rooms and allow the free movement of furniture.

Simple plumbing and drainage. Economy and efficiency both result from compact plumbing installations, with short pipe-runs, well-placed boiler and connections, and correct lagging. Maintenance costs can be reduced by keeping pipes and fittings away from external walls, ventilators and other cold places. The one-pipe system merits attention since it may lead, if properly designed and carried out, to economy and more efficient disposal.

The minimum of pure decoration. Decoration is often a substitute for good architectural design. Applied decoration becomes superfluous in a simple house if elevations are well proportioned and interest is obtained by textured surfaces, good use of colour and careful detailing of functional parts. Porches and balconies should not be added solely to improve the elevation. The former should be reserved for unusually exposed entrances, or for designs which dispense with halls of normal type; while private balconies are of little value below the second floor. White or coloured washes may be justifiable in rural areas where this is the local tradition, but in dirt-laden atmospheres they need too much maintenance. Screen walls and garden walls should be avoided; hedges are a cheaper and quite satisfactory substitute. If immediate protection for gardens is really required, simple fences can be used while the hedges are growing.

Fittings and Equipment

Experience has shown that not all the fittings and equipment provided by local authorities may be required; some families already have wardrobes, or prefer to buy a complete bedroom suite containing a wardrobe, so that the built-in wardrobe and the space it takes up are not fully used.

Again, some tenants already have gas or electric cookers, and do not require to have this relatively costly item provided for them. When equipment of this kind is omitted, space must, of course, be provided for it, together with any gas pipes or electric wiring which the tenant's equipment may require.

Some examples will indicate the type of

* These areas may be modified as a result of further experience of the type of plan suggested in D.H.S., Circular No. 94/1951.

LOOK FOR THESE POINTS IN SLIDING DOOR GEAR

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omissions which should be considered and those which should not.

Examples of items which should always be omitted:

Refrigerators
Washing machines
Picture rails
Wireless and television aerials
Locks on living room, kitchen and cupboard doors.

Examples of items which may be omitted:

Built-in wardrobes (unless the area of the bedroom is less than 90 sq. ft.)
Coat cupboards
Broom cupboards
Washboilers
Cookers.

Examples of items which should never be omitted:

Bath
Wash-hand basin
W.C. suite
Water heating appliance
Gas and/or electric installation (where gas and/or electricity are available)
Sink and tub.

These recommendations need not prevent authorities from providing essential furniture on hire or hire-purchase to their tenants, so long as the charges are sufficient to cover the whole cost of this service.

Tenders

These should be "firm" for everything except basic wage rates and the prices of important materials; that is, these should be the only items in respect of which the contractor can claim reimbursement of increases in cost or the local authority can recover decreases. Provisional sums should be avoided wherever possible in order to obtain competitive prices. When alternative materials are specified, the relative items should be included in the schedules of quantities in such a way as to secure that their costs are included in the tender figure.

In areas where the number of local contractors is limited, firms from other areas should also be invited to tender.

It will help to secure the rapid completion of houses if a clause is included in the contract fixing a date for their completion and providing a penalty for late performance. A clause of this kind is now standard practice in non-traditional housing.

Inadvisable Economies

Local authorities should not try to save by measures which will make their houses less convenient to live in, less durable, or less resistant to cold, damp or noise.

In some areas the use of stone is traditional or is called for by the nature of the surroundings. Even where houses do not qualify for the special subsidy paid under section 88 of the Housing (Scotland) Act, 1950,* the use of stone can still be permitted where there is a need to maintain employment among local stone-masons or where the cost of stone as a building material does not greatly exceed that of brick. It may sometimes be possible to confine the use of stone to the front of the house, but each case should be considered on its merits.

Scottish slates, though sometimes dearer than other slates or tiles, should not be avoided for that reason; the revival of the Scottish slate industry depends to a great extent on the acceptance of this difference in price for the present.

Experimental methods of building or equipping houses can also be approved and a special subsidy can be paid under section 90 of the Act to assist such methods.* They should, of course, be on a small scale, and the Department's consent must be obtained before they are put in hand.

* See D.H.S. Circular No. 66/1949.

NEWS IN BRIEF

Worthing's 500th House

The 500th house to be built by Worthing Rural District Council since the war was opened on January 2.

The Token Import Scheme

The Board of Trade announce that the Token Import Scheme will continue in 1952 for imports from Canada and the United States of America, but at a reduced level.

In Monte Carlo Rally

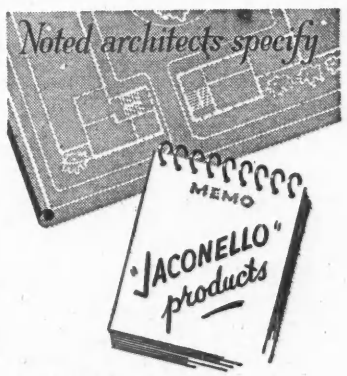
Mr. Allan C. Wates, of Wates, Limited, the London builders, is to take part in the Monte Carlo Motor Rally, which starts from Glasgow on January 22. He will drive a Humber Hawk car.

The Uses of Portland Stone

The London Association of Master Stone Masons has made a film, available free to educational establishments and professional institutions, showing the quarrying, fabricating and fixing of Portland stone. Inquiries for the loan of the film to the Association at 47, Bedford-square, London, W.C.1.

Interest Rates and Rents

It was stated at a conference of local authorities of Glamorgan and Monmouthshire at Cardiff on January 12 that the increase in interest rates would add between 3s. 2d. and 4s. 1d. a week to the rent of houses costing between £1,400 and £1,800 to build. The conference passed a resolution asking the Minister for Welsh affairs to bring the matter to the urgent attention of the Government with a view to speedy and generous consideration of Exchequer subsidies.



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Manchester Development

Manchester City Council has approved a £180 million development plan for the city which will now be sent to the Minister of Housing and Local Government. The plan proposes the building of 50,000 houses, new roads, more open spaces and improved social amenities.

Employment Figures

According to the latest employment figures there was no change in the total working population during November. A decrease of 10,000 men was offset by a similar rise in the number of women. The number employed in the building and contracting industries dropped by 7,000.

South Bank Competition

The winning entries in the *Sunday Times* South Bank Competition, which invited artists, architects and members of the public to submit designs for the future of the Festival site on Thames-side, are on show at Kemsley House, London, W.C.1. A representative selection of other entries submitted is also on view. The Exhibition is open daily (Mondays to Fridays) from 10 p.m. to 5 p.m., and will close on February 1.

Heat Loss from Dwellings

How heat losses from houses and flats can be reduced to reasonable proportions is described in Building Research Station Digest No. 35, "Heat Lost from Dwellings" (Stationery Office, price 3d.). The leaflet describes simple improvements in methods of construction that will reduce the heat input required in a normal house by as much as 35 per cent.

Stacking Furniture

An exhibition of their latest range of tax-free furniture of simple contemporary design, was given by S. Hille and Co., Ltd., at the Rayon Design Centre, Upper Grosvenor-street, W.1, on December 31. The newest addition to the range is an armless stacking chair in beech designed by Mr. Robin Day. It is claimed to be suitable for use in the home as a dining-room chair and in lecture halls, restaurants, hospitals, schools, shops, etc. A rayon covered slip-on squab seat enhances its appearance as a dining-room chair. Six stacked chairs can easily be carried by one man, although they could be stacked in larger numbers if required. Mr. Day has also designed a stacking table. Other items in the range suitable for dining- and living-rooms include a sideboard storage unit, bookcase, dining table, and a fireside chair.

Arousing Interest in Architecture

The suggestion has frequently been made that designs for important buildings should be exhibited at an early stage, both to stimulate the interest of the public in architecture and to allow the critics to make their comments while there may still be time to modify the designs. This has been done by the County Planning Officer for Middlesex, Mr. B. J. Collins, in the case of the design for a college for further education which the county council proposes to build at Harrow. During recent weeks a model of the building, with explanatory drawings, has been on exhibition at Wembley Town Hall and at the Harrow Council offices at Wealdstone. A note was taken of the comments of the local residents who have been to see it. The design is by the County Architect for Middlesex, Mr. C. G. Stillman, F.R.I.B.A., and his assistant, Mr. G. F. Holden, A.R.I.B.A.

The National Self-Build Association

The London and National Self-Build Association was formed at a meeting in London on January 11. The object of the association is to help people build their own homes by pooling their financial and (voluntary) labour resources. The address of Mr. G. H. Whitehead, who has organised the association, is 24, Holborn, E.C.1.

Help for "Self-Help" Housebuilders

An encouragement to "self-help" housebuilders has been given by a large firm of builders and plumbers' merchants who, in the early stages of such schemes, have provided facilities for the supply of the necessary materials, and have also given valuable technical assistance. Mr. W. S. Shirra, divisional director of Rowe Bros. and Co., Ltd., Birmingham, a concern which also has branches in London, Liverpool, Bristol and Exeter, said that the Birmingham organisation had been closely associated with schemes initiated among groups of workers in large industrial firms in the city. He added: "Our experience of the work of the Fortitude Housing Association" (described in our issue of October 26), "formed by employees at Fort Dunlop, who plan to build 50 houses for themselves, has been particularly interesting and invigorating. Initial financing is a big difficulty for many," he said, "but the existing groups appear to have surmounted this. We believe we can help properly organised groups over some of their stiffer stiles, especially in the early stages. At all events, we are ready to give self-help groups all the backing we can."

Firm's New Showroom

A new showroom at Kensington Church-street, W.8, was opened by Block and Anderson, Ltd., on January 11. Its main purpose is to exhibit the firm's office machinery products. The façade has been constructed flush with the existing front in view of the proposed road widening scheme for Kensington Church-street. The type and finish of the machines influenced the choice of grey and green as the main colour scheme. The walls are covered in green mural rexine, with fittings in dyed sycamore. One side of the room has been devoted to a waist-high counter for the storage of supplies, and as a stand for various machine models. Opposite this, a series of demonstration tables has been fitted into alcoves, each divided from the next by dwarf partitioning and lit by concealed lighting with overhead spotlights controlled by an operator. A tropical aquarium has been built into the wall opposite the entrance, and tropical plants have been used for decoration in both the entrance and showroom. The architect was Mr. D. W. Willoughby, of Chesterton and Sons, and the contractors were Messrs. Falkus Bros., Ltd.

British Standards

The British Standards Institution has recently issued the following British Standards: B.S.459, "Fire-Check Flush Doors and Frames," price 2s.; B.S. 1787, "Steel Windows for Industrial Buildings," price 4s.; B.S. 1245, "Metal Door Frames (Steel)," price 2s. 6d.; B.S. 1105, "Wood Wool Building Slabs," price 2s.; and B.S. 1783, "Coloured Pitch Mastic Flooring incorporating Lake Asphalt and Bitumen," price 2s. 6d. Copies of each of these Standards are obtainable from the Sales Dept., B.S.I., 24, Victoria-street, S.W.1.

TRADE NEWS

Wrought-Iron Gates

Cemp Metal Products, Ltd., 407a, Brighton-road, South Croydon, Surrey, have published a brochure illustrating their "Cemp" range of metal gates. These gates are manufactured in six patterns and specifications are contained in the brochure, together with details of ornamental iron and tubular posts.

Steeplejacks

The third reprint of a short treatise on the steeplejack profession has been introduced by M. Macdonald and Co. (Steeplejacks), Ltd., London, W.C.2. It is the steeplejack who is the "backroom-boy" concerning the safety of high buildings, church spires, chimneys, and all those structures which lift their heads into the heavens. "Steeplejacks," the title of this publication, contains many pictures of reconstruction of a variety of buildings ranging from church spires to chimney stacks. In addition, there are illustrations of stacks being demolished.

A Kitchen Planning Service

For all who are thinking of "having something done" to make the kitchen pleasant to work in, The Hotpoint Electric Appliance Company have established a kitchen planning service. The company have now added to their range of domestic products kitchen cabinet equipment and sink units. In this way they seek to combine the function of their electrical domestic equipment with a kitchen layout, which is not only pleasing to work in, but also convenient and labour saving in the fullest sense.

The company seeks to make its service available through electrical suppliers, but details can be obtained by writing direct to any of its district offices or to the kitchen planning department of the company at Peterborough.

BOOKS FOR BUILDERS

HOW TO ESTIMATE
By JOHN T. REA
The *new 11th edition* has been brought up to date to September, 1950, with tables giving cost increases for materials and labour for 1936-7, 1939 and 1944-50. Over 680 illustrations.
21s. net (by post 21s. 10d.)

DRAINAGE AND SANITATION
By E. H. BLAKE
10th Edition just published.
"...this has become a standard volume covering in a concise and compact measure the whole subject."—*The Engineer.* Revised and re-illustrated.
15s. net (by post 15s. 9d.)

FLETCHER'S QUANTITIES
Revised by A. E. BAYLIS
12th Edition revised.
This famous work presents, in tabulated form, the methods of the valuation and measurement of building and engineering work. 700 pp. Many diagrams.
30s. net (by post 31s.)

THE PRINCIPLES OF STRUCTURAL MECHANICS
By PERCY J. WALDRAM
3rd Edition revised.
"The success of the book depends not merely on the author's obvious mastery of his subject... but even more on his uncommon gift of lucid explanation."
—*The Architects' Journal.*
18s. net (by post 18s. 9d.)

B. T. BATSFORD LTD.
Retail Dept.,
15 North Audley Street, London, W.1

New Fast-Drying Paint

Sissons Brothers and Co., Ltd., are placing on the market, under the name Rapidec, a brand new resin emulsion decorative finish. As its name implies, the characteristics of Rapidec are such as to make for speedier decoration. The addition of water according to the porosity of the surface to be painted is all that is necessary to make up the priming coat. A leaflet giving fuller details is available from the manufacturers at Bankside, Hull.

OFFICIAL NOTIFICATIONS

Open General Licence for Softwood and Boxboards

The Minister of Materials has granted an open general licence permitting any person to acquire and supply any softwood timber and boxboards which are not situated in the United Kingdom, the Isle of Man, or the Channel Islands. This licence supersedes earlier open general licences issued on October 11, 1950, and February 1, 1951, which permitted the acquisition and disposal of softwood, mining timber and boxboards in a limited number of countries outside the United Kingdom. The acquisition and supply of mining timber not in the United Kingdom has since been permitted by the Timber (Control) Order, 1951, although licences are still required for its import into the United Kingdom.

The granting of this licence does not remove the restrictions on the import of softwood timber and boxboards into the United Kingdom, nor those on their acquisition, supply, and consumption in the United Kingdom. Importation of softwood will be in accordance with the scheme at present in operation. The policy governing the granting of import licences for boxboards remains unchanged. The acquisition, supply and consumption of softwood are subject to the restrictions imposed by the Timber (Control) Order, 1951 (S.I. 1951, No. 1067).

The licences are on sale at H.M. Stationery Offices, price 2d.

Semi-Manufactures of Copper, Zinc and their Alloys: Export Licensing

Because of the world shortage in the supply of the raw materials, and the high rate of demand for essential purposes, exports of semi-manufactured copper and copper alloys in the second, third and fourth quarters of 1951 were restricted to approximately half the rate prevailing in the first six months of 1950. The Board of Trade now announce that in conformity with the recommendations of the International Materials Conference exports of semi-manufactured copper and zinc and their alloys in the first quarter of 1952 and until further notice will be licensed at 80 per cent. of the rate of export in 1950.

Applications for export licences should be addressed, fully documented, to the Export Licensing Branch of the Board of Trade, Atlantic House, Holborn Viaduct, E.C.1. The validity of existing licences is not affected by this notice.

PERSONAL COLUMN

SUNDAY, JANUARY 6, was the 50th anniversary of Mr. Leslie C. W. Jenkins's association with the company of John Wright and Sons (Veneers), Ltd., of which he is now chairman and joint managing director. During the following week, a number of presentations were made to him, and from the company as a whole came a unique gift of the last of the great Bibles which was available for private distribution.

THE SCOTTISH BUILDER

Foreign Bricks for Scotland

THE flow of foreign bricks into Scotland is helping to meet the shortage of home-produced bricks. Clydebank was the first Scottish town to book Belgian bricks, and supplies already in have proved acceptable and of value. After a lull over the Christmas and New Year holidays, imports are again being resumed. So far as can be seen at the present time, the import of these Belgian clay bricks will not affect the Scottish position in the least. They are meeting a need which cannot be immediately met by home works, and are obviously not competitive under normal conditions.

Dundee Imports Bricks

DUNDEE TOWN Council has approved the purchase of two million Belgian wire-cut clay bricks at a cost of some £270,000. The bricks will be enough to permit the completion of 100 houses. The order has been placed after many months of difficulty over the supply of bricks to keep the city schemes in progress.

A Hydro-Electric Project

A £10m. HYDRO-ELECTRIC SCHEME for the Loch Awe area was outlined by North of Scotland Hydro Electric Board officials to Argyllshire County Council recently. The scheme involves the following developments:

It is proposed to build a weir across the River Awe shortly, below its outflow point from the Loch. An intake near the weir will take water by tunnel to a power station on the shores of Loch Etive, to the east of the mouth of the River Awe. Levels will not be materially affected on Loch Awe. Loch Nant will be dammed and raised to 680 ft. above sea level and a pipe line will feed a power station near Inverinan on Loch Aweside. A dam on the Cruachan burn will create a reservoir at 1,280 ft. above sea level, diversion aqueducts will add to the volume and a tunnel will lead to a power station on Loch Aweside near the Pass of Brander. The scheme will involve some seven to ten years' work with a proposed output in the region of 165 million units of electricity per annum.

The information given to the Council is preliminary advance data on a proposal which will be detailed more fully in due course.

NEW BUILDINGS

Aberdeen.—Scottish Gas Board (North-Eastern Div.) have plans in hand for an extension to the gas works. Est. cost, £425,000.

Edinburgh.—Corporation granted interim warrant by Dean of Guild Court for excavations and foundations of another 220 houses at Inch Housing Development, Liberton, to cost £359,000.

Edinburgh.—Plans to be prepared for £100,000 addition to be erected by South Regional Hospital Board, Drumhough-gdns., Westend, Edinburgh, at the Princess Margaret Rose Hospital. Architects are Stewart Kaye & Partners, F/A.R.I.B.A., 14, Hill-st., Westend, Edinburgh.

Glasgow.—Plans to be prepared for new buildings, Eastvale-pl., for Stephen & Struthers, Ltd., designers, Eastvale, Glasgow.

Glasgow.—Plans are in hand for additions, etc., at Craighead-st., for White Horse Distillers, Ltd., from plans by their own architects at 64, Waterloo-st., Blythswood, Glasgow, W.C.2.

Glasgow.—Plans are in hand for alterations, etc., at Invernairn Brewery, for MacLaughlan, Ltd., for which the architects are Frank Burnet, Boston & Bell, F/A.R.I.B.A., 180, Hope-st., Blythswood, Glasgow, W.C.2.

Glasgow.—Plans are in hand for extensions, etc., to Wellpark Brewery, Duke-st., Dennistoun, for J. & R. Tennant, Ltd., for which the architect is Thomas S. Cordiner, A.R.I.B.A., 261, West George-st., Blythswood-chbrs., Glasgow, W.C.2.

Glasgow.—Plans to be prepared for alterations, etc., at the Provan Chemical Works, Royston-rd., Knightswood by the Scottish Gas Board architects, 30, John-st., Glasgow, C.1.

Glasgow.—Plans are to be prepared for the reinstatement with additions of the Neilson Jute Co.'s premises at Main-st., Bridgeton, for which the architects are William Baillie & Son, F/A.R.I.B.A., Commercial College-bldgs., West Regent-st., Blythswood, Glasgow, W.C.2.

Glasgow.—Plans are in the hands of their architects for alterations which William Murray & Co., Ltd., Craigmiller Breweries, Edinburgh, are to carry out at their Glasgow premises, North Woodside-rd., Cowcaddens.

Lanarkshire.—Plans have been prepared by their own architects for carpet factory buildings estimated at £85,000 which are to be erected in Rutherglen by Archibald Stevenson & Son, Ltd., Bertram-st., Burnbank.

Stirlingshire.—Plans have been prepared for an extension at their Grangemouth factory, estimated to cost over £57,000, which the Imperial Chemical Co., Ltd., Glasgow, will erect.

Stonehaven.—Local authority received allocation of further 30 houses. Eight traditional are to be built at Old Town, and 22 non-traditional houses at Christie-crescent.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained

BUILDING

JANUARY 21.

***†Cardiff T.C.**—(a) New technical college, and (b) construction of off site sewers in connection with above at Llandaff. (a) L. C. Patterson, Q./S., 11, Cathedral-rd. Dep. £3 3s. (b) E. C. Roberts, City S. Dep. £1 1s. Tenders by February 18 for both schemes.

†Goseley U.D.C.—40 houses and 20 bungalows at Woodcross estate. C., Council House. Dep. £2 2s.

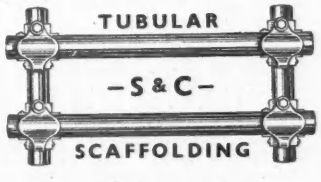
JANUARY 22.

***†Surrey C.C.**—Four pairs of police houses, Pinegr., Hanger Hill, Weybridge. County A., Kingston.

JANUARY 24.

***†Peterborough T.C.**—90 houses, Dogsthorpe North estate. F. J. Smith, City E. & S. Dep. £2 2s. Tenders by February 18.

Having Secured the Contract— what about the Steel Scaffolding?



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STEPHENS & CARTER LTD.

The British Steel Scaffolding Co.

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JANUARY 25.

***Newcastle Regional Hospital Board.**—Villa, Prudhoe and Monkton Hospital. E. B. Jenkins, Secretary, Dunira, Osborne-rd.

JANUARY 26.

***†Essex C.C.**—School, Epping Green. H. Conolly (F.), County A., Chelmsford.

***†Essex C.C.**—School, Debden L.C.C. estate, Loughton. H. Conolly (F.), County A., Chelmsford.

JANUARY 28.

***†Birmingham T.C.**—Conversion of Birmingham Stadium (Delicia Cinema), Gosta Green, to a theatre centre. H. J. Manzoni, City E. & S. Dep. £2 2s. Tenders by February 26.

***†Birmingham T.C.**—72 flats, Brandwood Park-rd., King's Heath. City E. & S. Dep. £2 2s.

***Northampton C.B.**—72 houses, Cherry Orchard Farm, Weston Favell. Boro' A. Dep. £2 2s. Tenders by February 18.

JANUARY 30.

Cornforth U.D.C.—12 houses at Highfield-Kelletrd. estate. Middleton and Jones, Architects, 1, Queen-st., Lancaster. Dep. £2 2s.

***†Lothingland R.D.C.**—18 houses on three sites. B. A. Hatcher (A.), Council Offices Rectory-rd., Lowestoft. Dep. £2 2s. Tenders by February 25.

***†Wandsworth B.C.**—12 flats, Baldry-gdns., Streatham, S.W.16. B.E., S., and Architect.

JANUARY 31.

***Blackburn C.B.**—School, Witton Park, and extension, Longshaw prim. jun. sch. B.E. Dep. £2 2s. (each).

***†Liverpool.**—Junior school for 480 children at Speke for R.C. Authorities. J. C. Prestwich and Sons, Architects, Bradshawgate-chbrs., Leigh. Dep. £3 3s.

FEBRUARY 1.

***Croydon C.B.**—Laboratories and classrooms, Lady Edridge Grammar sch., Chfton-rd. Chief Education Officer, Katherine-st. Dep. £1.

***†West Ham C.B.**—14 maisonettes, East-rd., E.15. T. E. North (F.), Boro' A. and Planning Officer, 70, West Ham-la., E.15. Dep. £2 2s.

FEBRUARY 2.

Leek U.D.C.—28 houses at Haregate estate. John A. Gilchrist, Architect, Town Hall. Dep. £5 5s.

Ripon and Pateley Bridge R.D.C.—30 houses at Summer Bridge. J. C. Kenyon, Architect, Council Offices, Pateley Bridge.

***Saffron Walden R.D.C.**—18 houses. A. W. Overall, C.

***Stepney B.C.**—Repair to four requisitioned premises. Chief Technical Officer for War Damage, 191-3, Commercial-rd., E.1. Dep. £2 2s.

FEBRUARY 4.

Dartford R.D.C.—Six houses at Tylers Green-rd., Crockenhill. E. & S., Council Offices, West Hill. Dep. £2 2s.

***Swansea C.B.**—Supply and erection of structural steelwork for multilateral school at Penlan. Boro' A., Guildhall. Dep. £5.

***Weymouth-Melcombe Regis B.C.**—24 flats, Downclose estate. B.E. & S., 6, Pulteney-bldgs. Dep. £2 2s.

FEBRUARY 5.

***Brighton C.B.**—Adaptation of Hampden House, 120, Eastern-rd., into seven flats. B.E. & S., 26-30, King's-rd. Dep. £2 2s.

FEBRUARY 6.

Colne Valley U.D.C.—Ten houses and eight flats, and 12 houses (two contracts) at Causeway Side, Linthwaite. Noel Heppenstall, Architect, 135, Armitage-rd., Milnsbridge, Huddersfield. Dep. £2 2s.

***Esher U.D.C.**—40 houses (four contracts) at Slough Farm housing estate, Claygate. S., Council Offices. Dep. £1 1s. each contract.

Eston U.D.C.—124 houses, Redcar-rd. East estate, South Bank. N. C. Harrison, A.M.Inst.C.E., E. & S., Normanby-rd, South Bank, Middlesbrough. Dep. £1 1s.

Warsop U.D.C.—Eight houses and eight bungalows at Leeming-la. estate. R. J. Smith, Town Hall. Dep. £2 2s.

FEBRUARY 7.

***Berks C.C.**—Kitchen and dining-room, Shinfield Three Mile Cross Sec. Mod. sch., nr. Reading. County A., Wilton-hse., Parkside-rd., Reading. Dep. £2 2s.

FEBRUARY 9.

Manchester T.C.—Two groups of houses on various sites. Director of Housing, Town Hall. Dep. £2 2s.

FEBRUARY 11.

Cemaes R.D.C.—Eight houses at Cilgerran site. Howard Williams and Partners, Priory-st., Cardigan. Dep. £3 3s.

***Dagenham B.C.**—42 flats, Dagenham-rd. B.E. & S. Dep. £2 2s.

***Dagenham B.C.**—Eight flats, Wanty Corner, Rainham-rd. North. B.E. & S. Dep. £2 2s.

***South Shields C.B.**—15 flats, Lawe-rd. B.E. Dep. £2 2s.

FEBRUARY 12.

***Brighton C.B.**—Police houses, Beacon Hill, Ovingdean. B.E. & S., 26-30, King's-rd. Dep. £2 2s.

***Brighton C.B.**—Sec. sch., Varndean. B.E. & S., 26-30, King's-rd. Dep. £3 3s.

***Deal B.C.**—36 flats, Orchard-ave. B.E. & S. Dep. £2 2s.

***Flints C.C.**—Secondary school, Saltney. W. Griffiths (L.), County A., Llwynegrin, Mold. Dep. £3 3s.

FEBRUARY 13.

Norfolk C.C.—Six police houses and two nurses' houses at various sites. County A., 27, Thorpe-rd., Norwich.

FEBRUARY 15.

***Barnes B.C.**—Five houses, Laurel-rd., S.W.13. W. R. Shepherd, B.E. & S.

***Sheffield T.C.**—Foundations, drainage, etc., to sec. mod. sch. at Hurlfield. W. G. Davies (F.), City A. Dep. £3.

FEBRUARY 18.

***Deptford B.C.**—Public cleansing and disinfecting station, Speedwell-st., S.E.8. B.E. & S. Dep. £2 2s.

***West Riding C.C.**—Hall and teaching block, Ilkley College of Housecraft, Wells House. County A., Bishopgarth, Westfield-rd., Wakefield. Dep. £2 2s.

FEBRUARY 22.

***Esher U.D.C.**—34 dwellings (two contracts), Slough Farm estate. E. & S. Dep. £1 1s. (each).

***Esher U.D.C.**—64 dwellings (three contracts), Winston-dr. estate, Stoke D'Abernon. E. & S. Dep. £1 1s. each contract.

FEBRUARY 25.

Crediton U.D.C.—24 houses at Spruce Park. F. W. Beech and E. Curnow Cooke, F./L.R.I.B.A., 15, Dix's Field, Exeter. Dep. £2 2s.

***†Shrewsbury B.C.**—Six shops with maisonettes over on following sites: Oakfield estate, Springfield estate and Crowmoor estate. B.S. Dep. £2 2s.

FEBRUARY 26.

***Llandovery B.C.**—12 houses, roads and sewers, etc., Caefecincaeau. B.S. Dep. £3 3s.

NO DATE.

Auckland Harbour Bridge Authority.—Construction of steel bridge over Auckland Harbour, New Zealand. Freeman, Fox & Partners, 68, Victoria-st., Westminster. Dep. £5.

***Bilston B.C.**—138 houses, in three contracts. Boro' A., 20, Wellington-rd. Dep. £2 2s. (each).

Chesterton R.D.C.—64 houses at four sites. H. Jackson, Architect, 93, Hartington-gr., Cambridge. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

JANUARY 23.

Winchester T.C.—City E. (Materials.)

JANUARY 28.

Friern Barnet U.D.C.—E. & S. (Materials.)

JANUARY 29.

Darlaston U.D.C.—E. & S. (Materials.)
Golborne U.D.C.—E. & S. (Materials.)

JANUARY 30.

Bristol T.C.—E. & S. (Materials.)
Matlock U.D.C.—E. & S. (Materials.)

JANUARY 31.

Oxfordshire C.C.—County S. (Materials.)

FEBRUARY 1.

Bromley B.C.—B.E. (Materials.)
Grimsby C.B.—B.E. (Materials.)

FEBRUARY 2.

Goole R.D.C.—S. (Materials.)
Deal B.C.—B.E. & S. (Materials.)
Rishton U.D.C.—Boro' S. (Materials.)

FEBRUARY 4.

Cuckfield U.D.C.—S. (Materials.)
Keighley B.C.—B.E. & S. (Materials).
Merioneth C.C.—C.S. (Materials.)
Shrewsbury B.C.—B.S. (Materials.)
Stoke-on-Trent T.C.—C.S. (Materials.)

FEBRUARY 6.

Dewsbury C.B.—B.E. (Materials.)
Rugby B.C.—B.S. (Materials).

FEBRUARY 7.

Leeds T.C.—Highways Engineer. (Materials.)
Mitcham B.C.—B.E. & S. (Materials.)

FEBRUARY 9.

Fareham U.D.C.—E. & S. (Materials.)
Halifax B.C.—Boro' E. (Materials.)

FEBRUARY 11.

Aldridge U.D.C.—E. & S. (Materials.)
Bacup B.C.—B.E. (Materials.)
Newcastle-under-Lyme.—B.S. (Materials.)
Shoreditch B.C.—B.E. & S. (Materials.)
Warrington C.B.—B.E. & S. (Materials.)

FEBRUARY 15.

***Sheffield T.C.**—Electrical installation for sec. mod. sch. at Hurlfield. W. G. Davies (F.), City A. Dep. £2 2s.

***Sheffield T.C.**—Heating and hot water installation for sec. mod. sch. at Hurlfield. W. G. Davies (F.), City A. Dep. £2.

FEBRUARY 16.

Solihull U.D.C.—E. & S. (Materials.)

FEBRUARY 18.

Isle of Wight C.C.—C. (Materials.)

FEBRUARY 25.

Northumberland C.C.—C. (Materials.)

FEBRUARY 28.

Coventry T.C.—C.E. & S. (Materials.)

ROADS, SEWERAGE AND WATER WORKS

JANUARY 28.

East Kesteven R.D.C.—Sewerage and sewage disposal works in the parishes of Hecklington and Great Hale. Silcock and Simpson, 10, Park-row, Leeds, 1. Dep. £5.

"THE BUILDER" PRICES

PLASTERBOARD

Despite the notice recently printed about the prices of plasterboard, we are informed that there still seems to be some considerable confusion in the trade about the present day prices. For some months, plasterboard made by Plaster Products has been selling at a higher price—under Ministry of Works Authority—than that charged by the British Plaster Board–Gyproc Group, and the third manufacturer of plasterboard, Imperial Chemical Industries, Ltd. As from December 27 last, the prices of all plasterboard manufactured in this country, are the same, by arrangement between the manufacturers and the Ministry of Works.

JANUARY 31.

***Durham C.C.**—Tar paving playgrounds, Neville's Cross training college. G. R. Clayton (F.), County A., Court-la., Durham.

FEBRUARY 2.

Newton Abbot U.D.C.—Roads and sewers on the Buckland estate. E. & S., 18, Devon-sq. Dep. £2 2s.

FEBRUARY 15.

Shepton Mallet R.D.C.—Stoke-la. sewerage and sewage disposal. W. Herbert Bateman and Partners, Chesterfield House, Batheaston, Bath. Dep. £5 5s.

GENERAL BUILDING WORK

(LONDON)

Barnet.—INFANTS' SCHOOL.—Plans have been prepared by H. G. Cherry, F.R.I.B.A., 36, Gordon-sq., W.C.1, for proposed junior mixed infants' school at Totteridge for Hertfordshire C.C. Ed. Com.

Catford.—FLATS.—Lewisham B.C. to build 50 flats at Adelaide-rd. Plans by Boro' Architect's dept.

Edgware. — FACTORY BUILDING. — Boosey and Hawkes, Ltd., Sonorous Works, Deansbrook-rd., propose additional factory building. Plans by firm's own staff.

Kensington.—DWELLINGS.—B.C. Housing and Town Planning Com. have approved appointment of Gordon Jeeves, F.R.I.B.A., 61, Catherine-pl., S.W.1, architect for development of Denbigh-rd. and Westbourne-gr. housing site.

Maida Vale.—SCHOOL.—David Stokes, F.R.I.B.A., 32, Victoria-st., S.W.1, has prepared plans for R.C. school at Lanark-rd.

Shoreditch.—FLATS.—B.C. propose to spend an estimated £154,000 on erection of two blocks of flats at St. Mary's estate, Haggerston. Plans by Boro' Architect's dept.

(PROVINCIAL)

Alnwick.—R.D.C. to build 40 houses in 1952. Plans by T. J. Cahill, Lloyds Bank-chbrs.

Banbury.—British Railways to commence erection of new station, in 1952, at est. cost of £1,000,000.

Barnard Castle.—R.D.C. to erect 34 houses at Etherley and 26 at Evenwood. Architect is J. Lawton, 45, Galgate, Barnard Castle.

Belper.—R.D.C. propose 80 houses at Allestree in 1952.

Blandford.—Dorset C.C. Ed. Com. propose to build assembly hall, woodwork and metal rooms, kitchens, gymnasium, and three-storey classroom block, for Blandford sec. mod. sch.

Blyth.—T.C. propose erection of crematorium at Cowpen Cemetery.

Bradford.—T.C. to build 16 police houses.

Brighouse.—B.C. propose new branch library at Southowram.

Builth.—R.D.C. propose conversions at Wyeside, Castle-st., for council offices and chambers.

Bury.—Lancs C.C. propose to build old peoples' colony adjacent to Fairfield General Hospital.

Camborne-Redruth.—U.D.C. are to build 23 traditional and 18 Cornish units with 12 maisonettes at Treleigh, and 18 Cornish units at Park Bottom.

Cannock.—Gray & Ballinger, 15, Bridge-st., Walsall, have prepared plans for 33 houses at Hilton-la., Great Wyrley.

Clayton-le-Moors.—Daniel Thwaites & Co., Ltd., propose structural alterations to Load of Mischief Hotel.

Corby.—U.D.C. propose 294 houses at No. 1 site; 80 Gregory flats at Cottingham-rd. site; and 56 houses at Lodge Park No. 3 site, in 1952.—Stewart & Lloyds, Ltd., propose large extensions to works.

Dorchester.—N. Magnus Austin, Bowling Alley-walk, has prepared plans for 74 houses at Middle Farm estate.

Dukinfield.—Cheshire C.C. propose new gram. sch. for girls, at est. cost of £300,000.

Durham.—R.D.C. propose the following houses in 1952:—28 at Witton Gilbert; 29, Belmont; 30, Bearpark; 60, Sherburn; 20, Kelloe; and 60, Bowburn.

Eston.—U.D.C. to build 348 houses at Normanby-rd.

Felling.—U.D.C. propose to build 80 houses at Ellen Wilkinson estate, Wardley.

Flintshire.—E.C. propose new cty. prim. sch. at East Saltney; and R.C. authorities propose new sch. at East Saltney.

Gateshead.—Huwood Mining Machinery Co., Ltd., Team Valley Trading estate, propose to build 100 houses.

Golborne.—U.D.C. propose 30 houses at Culceth; and seek loan of £55,258 for 40 houses at Derby-rd. site.

Gosforth.—U.D.C. propose to build 126 flats at Jubilee-rd.

Hereford.—T.C. approved three-storey building at Commercial-rd., for H.A. Saunders, Ltd.

Hyde.—T. Wall & Sons propose extensions at Mottram-rd.; and B.C. propose adaptation of Mottram Old-rd. Hospital for housing purposes.

Jarrow.—Page, Son & Hill, 75, King-st., South Shields, have prepared plans for proposed off-licence premises and flat at Valley View, for P. G. Ward & Co., Ltd., Clayton-st., Jarrow.

Kinver.—C.C. propose erection of new fire station at Garden Fields.

Lancs.—E.C. approved estimate of £34,800 for inf. dept. at Penketh cty. sch.

Loftus.—C. D. Taylor, 41, Baxter-gate, Whitby, has prepared plans for 62 houses at Mars Farm housing site, for U.D.C.

Lydiate.—Buxton, Ltd., propose development scheme at Southport-rd.

Manchester.—Allied Dairies, Ltd., propose extensions to new dairy at Sharston, Wythenshawe, at est. cost of £40,000.

Morpeth.—R.D.C. to build 28 houses at Tynemouth and 12 at Hepscott.

Newcastle-under-Lyme.—B.C. propose erection of flats at Friarswood Mill site.—B.C. approved plans for rebuilding factory at Apedale, for Effra Sales & Services, Ltd.

Northern Ireland.—Plans are in preparation for erection of two factories at Enniskillen and one each at Lisnaskea and Londonderry which, when completed, will be leased respectively to Erne Clothing Co., Ltd.; Summit Shirt Co., Ltd.; English Sewing Cotton Co., Ltd.; and Dunlop Cotton Mills, Ltd.

Nottingham.—T.C. propose mixed sec. sch. at Sandhurst-rd.; Bulwell sec. sch. at Sneinton Boulevard; and mixed jun. sch. at Bramcote-dr.

Oldham.—B.C. propose conversion of tram depot into maintenance workshop, at est. cost of £40,000.

Oswaldtwistle.—U.D.C. to build seven bungalows and 20 houses at Grove-st. site, and propose alterations and improvements to town hall.

Peterborough.—Baker Perkins, Ltd., Westwood works, to build apprentice training sch. at works.

Prudhoe.—West Wylam and Prudhoe Co-operative Society to build £70,000 bakery at Crawcrook.

Rotherham.—E.C. approved final sketch plans for Kimberworth Park prim. sch.

Runcorn.—U.D.C. approved plans for extensions to hide store at Camden Tannery, for Camden Tanning Co., Ltd.

Sheffield.—Rigby's (Tilers), Ltd., Reed-st., propose to build factory and offices at Hoyle-st.

Sowerby Bridge.—U.D.C. seek loan of £40,744 for 24 houses at Beech Recreation Ground.

Stalybridge.—B.C. to build 32 houses and eight flats at St. George's estate. Architects are Howard & Benson, 88, Mosley-st., Manchester.

Stanley.—U.D.C. to erect 200 houses at Catchgate.

Stoke-on-Trent.—T.C. to negotiate with Cornes (Construction), Ltd., for 100 houses at Whitefield estate.

Stretford.—R. Freeman, Evans & Co. have re-

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ceived planning approval for proposed three houses at Kings-rd. and Auburn-rd.

Stretford.—Metropolitan-Vickers Elec. Co., Ltd., have received planning approval for erection of building, to house mica reclaiming plant; scrap metal store; casting store shed; and combustion test house at Westinghouse-rd.

Sunderland.—B.C. to build 1,200 houses at Grindon. Plans by Boro' Architect's dept.

Sunderland.—B.C. propose inf. sch. at Pennywell (£60,000); and prim. sch. at Grindon (£80,000).

Swansea.—B.C. to build crematorium at Morriston Cemetery.

Tipton.—B.C. to erect 28 flats at Coppice-st.

Tipton.—B.C. received layout approval for 188 dwellings at Park-la. West estate.

Wakefield.—H. Bennett, Cty. A., has prepared plans for ambulance depot at Stanley-rd., to cost £22,000; and fire service repair depot at Balne-la., to cost £18,383.

Wharfedale.—R.D.C. seek approval for Arthington housing scheme, and approved erection of six houses at Tredgold-av., Bramhope, for J. H. Crowther, Ltd.

Whitehaven.—Cumberland C.C. propose erection of science room and art room at Howgill-st. sch., Whitehaven. Plans by Cty. A., Portland-sq., Carlisle.

Worsley.—Lancs C.C. to prepare plans for new branch library.

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government Departments.*

Ashton-under-Lyne.—178 houses at Crowhill, for B.C.: †Bower Moffatt & Co., Ltd., Manchester, £240,112.

Ashton-under-Lyne.—Conversion of mortuary to pathological laboratory at Infirmary, for Manchester Regional Hospital Board: *Gordon & Hough, Ashton, £7,984.

Ayr.—Corporation has prepared plans for 24 houses at the Craigie housing site, for which the architect is Thomas O'Brien, M.I.M.E., A.R.I.B.A., M.I.W.E., Municipal-chbrs., High-st., Sandgate, Ayr: *Blackburn (Dumbarton), Ltd., Dumbarton.

Beeston and Stapleford.—16 houses and 20 flats at Ryecroft estate, for U.D.C.: *Simms, Son & Cooke, Ltd., Nottingham.

Belper.—26 houses at South Wingfield, for R.D.C.: *Vic Hallam, Ltd., £31,100.

Birkenhead.—Shops at Woodchurch estate, for T.C.: †Lloyed & Cross, Birkenhead, £33,000.

Birkenhead.—Single-storey extension to food factory at Canning-st., for Norman Foods, Ltd.: *E. J. Blakeley & Co., Ltd., Beaufort Works, Beaufort-rd., Birkenhead.

Blackpool.—Houses for T.C.:—20 houses at Inver-rd.: *R. Fielding, Stanhope-rd. Works, £28,145; 40 flats at Grange Park: *S. A. Gregory (Builders), Ltd., 27, Chapel-rd., Worthing; and four flats at Mereside: *T. Bannister & Sons, 176, Queen's-dr., £4,414.

Bootle.—40 dwellings at Sterrix-la. site, for B.C.: *Gregory Flats, Ltd., Worthing, £45,860; and six houses at Irlam-rd. site: *Woodend Building Co., Ltd., 232, Rice-la., Liverpool, £9,949.

Bootle.—Alterations and extensions to X-ray dept. at General Hospital: *W. A. Gale, Ltd., 151, Linacre-la., Bootle, £4,539.

Bradford.—Alterations and additions at City Courts, for T.C.: *Thos. Obank & Sons, Ltd., Thackley, Idle, £7,120.

Brighouse.—Repair and alterations of Waring Green Community Centre: *H. Castle, Bradford-rd., Brighouse, £8,590.

Burnley.—54 houses at Brickhouse and Far Brunshaw sites, for B.C.: *Spooners (Hull), Ltd., Glebe-rd., Stoneferry, £75,742.

Chatham.—Erection of fire and ambulance stations, for Kent C.C.: *F. Parham, Ltd., Eva-rd., Gillingham, Kent, £52,845.

Corby.—14 shops and maisonettes at Welland Vale-rd. and Willow Brook-rd., for U.D.C.: *Drury & Co., Ltd., Leicester, £52,437.

Coventry.—12 flatlets at Middlemarch-rd., for T.C.: *C. F. Lewis, Ltd., 10, The Gardens, Elmsdale-av., Foleshill; 10 shops with maisonettes over: *J. G. Gray, Broad-st.; and four houses at Courthouse Green: *C. F. Lewis, Ltd.

Derby.—Construction of day nursery at St. Mark's-rd.: *C. Hammersley (Little Easton), Ltd., Little Easton.

Doncaster.—B.C. allocated contracts for erection of houses on various estates:—
At Intake: *Wright & Kidger Bros., 2, Church-la., Bessacarr, £38,482 (32); *S. & R. Robinson (Doncaster), Ltd., £11,144 (8); *Wright & Clifton Bros., £11,144 (8); *C. E. Flanagan, £15,749 (12); *Direct Labour, £4,615 (4); *C. Taylor, £5,572 (4).
At Cantley: *Rushton Contractors, Ltd., Dorchie Wong-la., Tickhill, £26,358 (20); *Moore & Hooper, 65, Balby-rd., £11,342 (12); *J. S. Pott, 6, Church-la., Bessacarr, £9,321 (8); *H. Marshall & Sons, Ltd., 9, Manor-dr., £6,589 (5); and *J. G. Whittington & Son, 132, Thorne-rd., Edenthorpe, £4,615 (4).
At Cantley: *F. Moss & Sons (Builders), Ltd., £32,392 (26); *W. Dodd, 100, Thorne-rd., £25,117 (26); *Beckett & Wood (Builders), Ltd., 18, Cemetery-rd., £33,546 (26); *H. Marshall & Sons, Ltd., £48,825 (40); *Corfield & Sons, Old Rossington, Rossington, £29,547 (24); *J. S. Pott, £27,564 (22); *Hemsworth Bros., £19,564 (16); *Pearson, Snow & Co., Ltd., £15,789 (13); *Robinson Bros., 228, Thorne-rd., £14,299 (12); *Garrity Bros., 59, Central Boulevard, £11,142 (9); *T. E. Wright, £9,910 (8); and *The Dearne Construction Co., Dearne, £9,115 (7).

Durham.—50 houses at Framwellgate Moor, for T.C.: *H. F. Mole, Chester-le-Street, £68,554 (subject to M.H. & L.G. approval).

Durham.—Erection of practical room at Washington, Glebe mod. sch. and housecraft room at Trimdon Grange cty. sch., for C.C.: *R. Matthews & Co., 25, Villiers-st., Sunderland.

Durham.—Additional classrooms at New Penshaw cty. sch., for Durham C.C.: *E. R. Willey, Victoria-rd., Washington, Co. Durham, £4,714.

Easington.—14 houses at Wingate, for R.D.C.: *Tomlin & Son, South-cres., Seaham.

Edinburgh.—New examination hall, etc., for the City University, to be erected at Chalmers-st. Architect is W. H. Kinniemouth, F.R.I.B.A., A.R.S.A. (Rolland, Anderson, Kinniemouth & Paul, F/F.R.I.B.A., 16, Rutland-sq., Westend, Edinburgh: Heating and ventilating installations and allied works, *Ashwell & Nisbet, Ltd., Glasgow; installation of lifts, *Waygood Otis, Ltd., Glasgow and Edinburgh.

Exmouth.—Erection of laboratory and two classrooms at Rolle College, for Devon C.C.: *The Topsham Building Co., Ltd., High-st., Topsham, Devon, £4,711.

Formby.—16 houses at Lonsdale and Kings-rd. sites, for U.D.C.: *Formby Bros., Old Saw Mills, Formby, £21,200.

Glasgow.—New school at Wallacewell-rd. on Balarnock housing estate. Architect, John MacNab, F.R.I.B.A., 129, Bath-st., Blythswood, Glasgow, W.C.2: Contractors, *The Lambhill Iron Works, Ltd., Possilpark, Glasgow, N.W., £30,528; concrete works, *Concrete, Ltd., £18,261.

Golborne.—30 houses at Hampton estate, for U.D.C.: *Clough & Gaskell, Ltd., Wigan, £51,029.

Hebburn-on-Tyne.—Office additions for Wailes Dove Bitumastic Co., Ltd. Architects are Page, Son & Hill, 75, King-st., South Shields: *J. M. Black, Ltd., Glen-st., Hebburn.

Hebburn-on-Tyne.—Nine shops and flats for U.D.C.: *J. M. Black, Ltd., Glen-st., Hebburn.

Hexham.—17 houses at Halliwell Dene, for U.D.C. Architects are W. I. Dixon & Son, 123, Northumberland-st., Newcastle-on-Tyne: *R. C. Williamson (Durham), Ltd., Station Works, Rowlands Gill, Co. Durham.

Hinchley Wood.—Construction of new parish church of St. Christopher, Hinchley Wood, nr Esher, to cost £23,000. Plans by Samuel Beverley, F.R.I.B.A., 32, Old Burlington-st., W.1: *T. Porter & Son (Builders), Ltd., 101a, Ewell-rd., Surbiton, Surrey.

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Horsham.—20 housing units at Clarence-rd., for U.D.C. Quantities by S. W. Appleyard & Partners:—

Higgins & Edwards, Ltd., 18, Rushams-rd., Horsham	£26,545
E. C. Andrews Building & Construction Co., Ltd., 10, Middle-st., Horsham ...	24,926
Hoad & Taylor, Ltd., Market-sq., Horsham	24,411
Y. J. Lovell & Son, Ltd., "The Druids," Bishopric, Horsham	24,361
*R. Vinall (Henfield), Ltd., Henfield, Sussex	23,466

Kidderminster.—Shops and flats at Birchen Coppice, for B.C.: *J. & R. Perrin, Ltd., Sutton-rd., Kidderminster.

Kingsbridge.—Erection of three classrooms, offices, etc., at Grammar sch., for Devon C.C.: *T. Brook & Co., Ltd., Bridgetown, Totnes, Devon, £9,306.

Lancs.—Phase III of T. M. Marsh College of Physical Education, for E.C.: *W. Tomkinson & Sons, Ltd., Liverpool.

Lanchester.—16 houses at Hamsteels, for R.D.C.: *Direct Labour.

Liverpool.—Conveniences and storage accommodation at Wavertree Playground, for T.C.: *Marshall Bros. (Builders), Ltd., 3-5, Salop-st., Liverpool, £6,336.

¶London (Air Ministry).—Works contracts to value of £500 or over for week ended January 12:—
Building work: A. Roberts & Co., Ltd., London, S.W.1; Brown Fraser & Co., Ltd., North Berwick; F. Rendell & Sons, Ltd., Devizes, Wilts; T. Jenkinson & Sons (Doncaster), Ltd., Doncaster. *General maintenance work*: W. B. & F. T. Archer, Birmingham, 21; W. Lawrence & Son, Ltd., Swaffham, Norfolk; Geo. Foster (Cttrs.), Ltd., Broadway, Worcs.

Installation of heating services: G. N. Haden & Sons, Ltd., London, W.C.1. *Resurfacing work*: The Neuchatel Asphalte Co., Ltd., London, S.W.1. *Electrical wiring services and airfield lighting*: James Scott & Co. (Electrical Engineers), Ltd., Dunfermline; Drake & Gosham (Contractors), Ltd., London, S.W.1.

¶London (British Airways).—New contracts placed by London Midland Region:—

Patent aluminium roof glazing for Camden "B" goods shed: *Henry Hope & Sons, Ltd., Smethwick, Birmingham. Construction of R.C. stores building at Derby: *Concrete Piling, Ltd., 10, Westminster Palace-gdns., Artillery-row, Victoria-st., London, S.W.1. Renewal of roof coverings at Euston: *Henry Hope & Sons, Ltd., Smethwick, Birmingham. Scaffolding and safety sheets at Manchester Central station: *Mills Scaffold Co., Ltd., Highfield-rd., Levenshulme, Manchester. Removal of roof coverings at Manchester Central station: *Demolition & Construction Co., Ltd., 3, St. James's-sq., London, S.W.1. Removal of roof coverings at Stockport: *Thos. Collier & Sons, Ltd., Brown-st. Works, Leigh, Lancs. Renewal of roof and alterations at Earlestown: *Thos. Collier & Sons, Ltd., Brown-st. Works, Leigh, Lancs. Labour for cleaning and painting of Liverpool Lime-st. station: *Arundel (Contractors), Ltd., 70, Harris-st., Bradford, Yorks. Repair work at Thrumpton weir, River Trent: *L. Fairclough, Ltd., Terminal-hse., Grosvenor-gdns., London, S.W.

¶London (M.O.W.).—Contracts placed by M.O.W. during week ended January 5:—

London: 36, Whitehall, occupational services, F. Fry & Co., Ltd., 131, Gt. Suffolk-st., S.E.1. *Cheshire*: Mountwood Telephone Exchange, Birkenhead, extension to ground floor, J. H. Waring, 289, Hoylake-dr., Morton, Wirrall. *Perthshire*: Wellshill School, Perth, alterations and adaptations, P. Graham & Sons, Bankfoot, Perth.

Warwickshire: Sheldon, Birmingham, erection of telephone repeater station, W. J. Whittall & Son, Ltd., Lancaster-rd., Birmingham. *Yorkshire*: H.M. Prison, Hedon-rd., Hull, reconstruction, Stepney Construction, Ltd., Grovehill, Beverley; Board of Trade Storage, Flight Shed, The Airfield, Yeadon, interior and exterior painting, Arnold Sharrocks, Ltd., 229, Spotland-rd., Rochdale.

¶London (War Dept.).—Works contracts placed by W.D. during week ended January 5:—

Yorkshire: Building work, G. Calverley & Sons (Contractors), Ltd., Leicester; fencing, C. Chaple & Sons, Leyburn; concrete work, C. W. Haynes, Ltd., Scarborough. *Cumberland*: Water storage tanks, The Building & Repairs Co., Carlisle. *Wiltshire*: Miscellaneous, E. H. Bradley & Sons, Ltd., Swindon; Air-conditioning, Air Screw Co. & Jicwood, Ltd., London, S.W.1. *Oxon*: Waterproofing store sheds, Thomas Cotton, Ltd., Mansfield.

Lancashire: Building work, John Rimmer & Son, Ltd., Liverpool 6. *Denbighshire*: Building work, John Bowen & Sons, Ltd., Birmingham 12. *Midlothian*: Miscellaneous, T. Boland & Co., Edinburgh. *Ayrshire*: Structural steelwork, Wm. Bain & Co., Ltd., Coatbridge. *Middlesex*: Building work, Francis Jackson (Contractors), Ltd., Ickenham.

Malton.—28 houses at Peasey Hills-rd. site, for U.D.C.: *L. T. Oldfield & Son, Castlegate, Malton.

Market Rasen.—Food storage depot, for Ministry of Food: *F. A. Would, Ltd., Ladysmith-rd., Grimsby.

Manchester.—14 staff houses at Whittingham Hospital, for Regional Hospital Board: *George Harwood, Preston, £21,058.

Middlesbrough.—Ten police houses at Berwick Hills, for T.C.: *W. J. Emmerson, Middlesbrough, £13,918.

Middlesbrough.—28 houses at Berwick Hills site, for T.C.: *W. J. Emmerson, Middlesbrough, £34,824.

Middlesbrough.—New landing for ferry at Transporter Bridge, for T.C.: *W. Clark & Co. (Thornaby), Ltd., Stockton-on-Tees, £5,680.

Millom.—66 Trusted houses for R.D.C.: *T. Armstrong, Ltd., Cockermouth, £95,400.

Newcastle-on-Tyne.—Erection of new Rutherford sec. gram. sch., for E.C.: *A. Anderson, Ltd., Stanmore-rd.

Newcastle-on-Tyne. — Extensions to General Hospital, for Regional Hospital Board: *Anglo-Scottish Construction Co., Ltd., Gosforth, £24,000.

Newcastle-under-Lyme.—Houses for B.C.:—15 and four maisonettes at Earls-dr. estate: *A. Jones, Ltd., £23,987; four at Clayton-rd.: *Richards & Woodward, £5,612; four at Clayton-rd.: *A. Jones, Ltd., £5,612; 55 and four maisonettes at Windermere-rd. estate and 40 houses at Earls estate: *Cornes Construction Co., Ltd., £126,940; 12 houses at Windermere-rd. estate: *Roberts Bros., £16,082; and seven houses at Arnold-gr., Bradwell estate: *Willis Bros., £9,201.

Newport Pagnell.—Houses at Bury Field site, for U.D.C.: *H. W. Mason & Son, 34, Silver-st. (14); and *Hy. Mason (jun.), 130, High-st. (10).

Northfleet.—32 houses, Coldharbour-rd. estate, for U.D.C. Plans and quantities by G. E. Clay & Partners, Gravesend:—
L. R. Obee, 10, East Kent-av., Northfleet
Watson & Beaumont, Ltd., 330, Long-la., Bexleyheath, Kent ... ...
A. Beaumont (Bexleyheath), Ltd., 20, Crook Log, Bexleyheath, Kent ... ...
*David Jones (North Kent Construction Co., Ltd.), White Hart-rd., Orpington, Kent ... £42,509

Nottingham.—Extensions of crematorium at Southern Cemetery: *J. Richardson, 6, Beech-av., Mapperley, £15,446.

Oldham.—48 houses and 90 houses at Fitton Hill: *Unit Construction Co., Ltd.

Paignton.—Erection of children's home at Broadlands, for Devon C.C.: *Edwin Lee (Torquay), Ltd., 109, Union-st., Torquay, Devon, £5,878.

Perthshire.—Extension to Royal Infirmary of Perth. Architects are G. P. K. Young & Sons, F.R.I.B.A., 42, Tay-st., Northinch, Perth: Excavation, building, carpentry, joinery, concrete, brick and allied works *P. Graham & Sons, Ltd., Bankfoot, near Perth; asphalt and allied works, *Taylor Bros., Ltd., Perth; glazing and allied works, *P. & T. MacLeod, Ltd., Perth; painting and decorative works, *D. Bruce & Son, Bridgend; plumbing, sanitary engineering and allied works, *Frew & Stewart, Ltd., Perth; tile, terrazzo and allied works, *Toffolo, Jackson & Co., Ltd., Blythswood, Glasgow.

Preston-on-Tees.—Erection of additional classrooms at Preston-on-Tees cty. sch., for Durham C.C.: *Thornton Construction Co., Ltd., 30, Bridge-rd., Stockton-on-Tees, £4,818.

Ringwood and Fordingbridge R.D.C.—12 garages at Ringwood: *W. G. Shutler & Co., Gorley; four garages at Fordingbridge: *W. G. Shutler & Co., Gorley; two garages at Burton: *H. Parker & Sons, Ringwood. Architect, Frank Andrews, L.R.I.B.A., 45, High-st., Ringwood.

Scarborough.—56 houses at Eastfield: *A. Schofield (Builders), Ltd., St. Bedes, Hornsea.

Southport.—Alterations to Promenade Hospital: *T. Southworth & Sons, Ltd., 142, Virginia-st., Southport, £7,832; and Ophthalmic Unit at General Hospital: *T. Southworth & Sons, £5,834.

South Shields.—Erection of hostel for old people at Marsden-rd., for B.C.: *M. S. Failes, Ltd., 199, Costsworth-rd., Gateshead, £27,635.

Stamford.—Old people's bungalows near Orchard-rd. and houses: *F. J. Lenton & Partners, Broad-st., Stamford.

Stockton-on-Tees.—Construction of new St. Peter and St. Paul R.C. prim. sch.: *Fordy & Son, Boathouse-la., Stockton, £44,270.

Stromness.—26 Hall cottage-type houses: *Alexander Hall & Son (Builders), Ltd., Aberdeen, £52,308.

Sunderland.—Erection of showrooms and offices at Paley-st., for Adams & Gibbon, Ltd. Architects are Newrick & Blackbell, 58, John-st., Sunderland: *Snowdon Bros., Belford-rd., Sunderland.

Sunderland.—Conversion of Falstone Hotel, Roker, into old people's hostel, for T.C.: *Direct Labour, £7,000.

Tarvin.—Eight houses at Quarry Hill, Farndon, for R.D.C.: *H. Jones & Sons, £10,257.

Tiverton.—Erection of cty. prim. sch. at Elmore, for Devon C.C.: *Nicks Bros., Beacon Works, Bradninch, Devon, £20,477.

Uttoxeter.—22 houses at Weaver Lodge and Bentley House estates: *O'Dair Bros., Ltd., Uttoxeter.

Wisbech.—Houses for R.D.C.:—Four bungalows at Gosmoor-la.: *H. F. Mann, £4,045; six houses, Outwell: *High & Wallis, £8,780; four houses, Tydd St. Giles: *R. H. Reed & Son, £5,959; four, Wisbech St. Mary: *C. R. Peggs, Ltd., £5,937; and four bungalows at Christchurch: *F. H. Simmonds, £4,730 (subject to M.H. & L.G. approval).

Writhington.—Office block at Hospital, for Manchester Regional Hospital Board: *Clough & Gaskell, Ltd., Wigan.

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